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THE

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ARCHITECTURAL RECORD

1934

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VOLUME 76 NUMBER I 1934 JULY

APARTMENT HOUSES AT CENTRAL PARK, NEW YORK CITY. Photograph by Gottscho

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MODERN FURNISHING AND DEC-ORATION. By Derek Patmore. The Studio Publications, Inc., 381 Fourth Avenue, New York City. 32 pages of text; 48 plates. \$4.50

BEAUTY LOOKS AFTER HERSELF. Essays by Eric Gill, T.O.S.D. Published by Sheed & Ward, 63 Fifth Avenue, New York City. 253 pages. 6 line illustrations. \$2

THE STORY OF ENGLAND'S AR-CHITECTURE. By Thomas E. Tallmadge. W. W. Norton & Company, Inc., New York. 363 pages, illustrated. \$4. A representative selection of contemporary work is evident in the illustrations of this annual English publication. Sixteen of the plates are in color, and the others in monotone. Some of the reproductions were made especially for this book, but recourse has also been had to illustrations which will already be known to subscribers to "The Studio" magazine. The accompanying text discusses decoration, and the selection and arrangement of carpets, fabrics, furniture, books, lighting and other elements composing the "modern room."

Eric Gill is well known as a sculptor. As an essayist he tells us, in all thirteen essays, that the artist is simply the responsible workman. "Look after goodness and truth, and beauty will take care of herself," so the artist sees truth and goodness in a number of different things, such as industrialism, modern architecture, philosophies of art, stone-carving, lettering, clothes, and repository art.

These essays have appeared before in English architectural journals and other periodicals. Mr. Gill scoffs at church decoration, insists that all the arts are essentially the layman's job, welcomes modern art in reaction to the sentimentality and hypocrisy of nineteenth century art, and hails the new architecture where the architect is free from old building conventions, free to consider his building as a thing of mass in three dimensions—the "plain" architecture which the author says we now must have. The book is set in Mr. Gill's own Perpetua type.

The author, a Chicago architect, is well known for his earlier volume, The Story of Architecture in America. This companion volume exhibits a similar array of information about English architecture, covering all periods, which should be useful to travelers and students as well as to architects. At the end of the book appears an alphabetical listing of places of architectural interest, a classification of London architecture according to styles, and an architectural map of England showing the places recommended for visit.

The book has been written to fill a deficiency in the architect's bookshelves, for as Mr. Tallmadge states in his foreword: "You will be astonished, I am sure, to be told that of the dozens of books on English architecture not one tells its story consecutively from the beginning to our day. Almost all are on special phases, such as Tudor architecture, or on special topics, such as cathedrals or manor houses, treated in most cases with great authority and detail, and often in huge folio volumes, magnificently illustrated, and impossible to carry about. The only book that comes anywhere near to telling the complete story is recent one, which, however, abruptly drops

the subject at the beginning of the Regency, about 1810. This is a serious deficiency, including all Victorian and modern architecture, and I should like to fill it as best I can."

The National Planning Board is a division of the Public Works Administration as set up by President Roosevelt. One of the functions of the Board is to consider non-Federal projects seeking financial aid from the Public Works Administration. Proposals from state, municipal and other local public bodies are received by State Advisory Boards, appointed by and representing the Public Works Administration. The states are grouped into ten regions, each with a Regional Adviser who reports to the National Planning Board on projects submitted to him by the State Advisory Boards in his territory. This organization of National Planning Board, Regional Advisers and State Advisory Boards does not originate plans for non-Federal projects. To bring about a corresponding organization representing the originators of eligible projects, namely, states and their political subdivisions, the National Planning Board on December 11, 1933, offered to each of the Governors of states the services of a planning adviser to supervise the organization of state planning. One condition of the offer was that the Governor express his willingness to appoint a member of his planning commission as the state representative to a regional or interstate planning commission. Since then more than three-fourths of the states have appointed planning

The first regional conference of state planning bodies called under the auspices of the National Planning Board was held at Portland, Oregon, March 5, 6 and 7. The chairman, Marshall N. Dana, is the Adviser for (PWA) Region V, the Pacific Northwest, comprising Washington, Oregon, Idaho and Montana. The conference was attended by about 500 representatives of Federal, state, county and municipal governments, port authorities, railroads, public service corporations, educational institutions and civic and business associations. Its objectives were:

1. To consider the integration of public works projects, both Federal and non-Federal, and both authorized and proposed, with other interests of cities, states, drainage areas, and the region, in the Pacific Northwest.

2. To formulate and adopt general plans and policies for the preparation of controlling plans as a guide for development in the Pacific Northwest, with which public works projects of all kinds may be harmonized.

3. To bring together Federal, state and local officials and others interested in the various phases of planning—land resources, mineral resources, water resources and power, commerce and industry, transportation, utilities, communities, welfare and instruction—and in planning as a whole, to interchange views, and to prepare and adopt directive policies for the organization and maintenance of planning work throughout the region.

The program provided for assembly of the Conference in a general meeting on the first morning, the division of the Conference on the first afternoon into eight functional sections and one geographic section, the continuation of sectional meetings during the second day, and the focusing of these meetings back into a general meeting on the third day, when the report of the Program and Policies Committee was adopted.

The sections into which the Conference resolved itself were:

- Land Resources.
 Mineral Resources.
- (3) Water Resources and Power.
- (4) Industry, Commerce, and Economics.
- (5) Transportation.
- (6) Community, City.(7) Education.
- (8) Welfare.
- (9) The Columbia Basin.

Within a few months, mostly since the first of the year, more than thirty cities of the Pacific Northwest have organized planning commissions, the four states comprised in the region have appointed such commissions, and a regional conference has been held. The papers read at the Conference prove the existence of a great variety of authentic information, in many cases the result of research work at agricultural colleges and state universities, so that the immediate problem of plan commissions is largely one of locating and using material procurable without undue expense of time or money. The general acceptance by Governors of the offer of assistance from the National Planning Board in organizing unpaid state planning commissions, coupled with the rapid progress of the idea of planning in the Pacific Northwest, suggests that preparation is being made throughout the country to collaborate with President Roosevelt's intention, as reported at the Conference, to divide the United States into six economic-drainage areas for study, research, the selection of public works projects by planning tests, and the use of these projects in association with local, state and regional advancement.

PROCEEDINGS OF THE FIRST PA-CIFIC NORTHWEST REGIONAL PLANNING CONFERENCE AT PORTLAND OREGON, March 5, 6 and 7, 1934. Pamphlet, 131 pages. Pacific Northwest Regional Planning Commission, Marshall N. Dana, Chairman, 220 Federal Court House, Portland, Oregon. PA-NAL AT 5, 6 neific mis-220

CALENDAR OF EXHIBITIONS AND EVENTS

November I Closing date of the 1934 Century of Progress Exposition in Chicago.

Until Remodeling Competition, conducted by the Good Housekeeping Studio, 57th Street and Eighth Avenue, New York City.

December 3-8 Eleventh National Power Exposition, at Grand Central Palace, New York

City.

NEWS OF THE FIELD

Horace A. Bailey has opened an office for the practice of architecture at 405 Fisher Building, Johnstown, Pennsylvania.

Ernest Thornell Brown announces the opening of an office for the practice of architecture at 201 East Fifth Street, Plainfield, New Jersey.

Donald Deskey, designer, announces removal of his office to 501 Madison Avenue, New York City.

The Federation of Architects, Engineers, Chemists, and Technicians has moved from 10 West 47th Street to 119 East 18th Street, New York City.

The Foss Construction Company, 171 South Los Robles Avenue, Pasadena, California, announces that it has succeeded The Foss Company, Builders. The personnel will remain the same with the addition of Roy R. Bush of Pasadena. The officers of the company are Roy R. Bush, President; C. D. Bogert, Vice President-Manager; Paul Judson, Secretary-Treasurer.

Photographs of the Y. M. C. A. Building, West 135th Street Branch, in New York City, which were published in the February issue, pages 161-167, inadvertently carried the name of James Clinton Mackenzie, Jr., as the designer. James Cameron Mackenzie is the architect.

The Perkins and Boring Fellowship, outstanding student honor in the School of Architecture of Columbia University, has been awarded for 1934 to Paul B. Schechter of 303 Jackson Avenue, Jersey City, N. J., according to an announcement by Dean Joseph Judnut. Mr. Schechter submitted the winning design in a competition the subject of which was the building for the proposed Institute of Urban Sciences on the block bounded by Riverside Drive, 120th Street, Claremont Avenue and 119th Street. He receives \$1,800 and will spend the next year in foreign travel and study. Second place went to Herman M. Cohn of 1358 Findlay Avenue, New York. Edwin A. Neale

of 18 Sherman Avenue, White Plains, N. Y., graduate of Amherst College, was third.

A decision to enlist the aid of the Missouri Historical Society in an effort to establish a fund for the purchase and preservation of St. Louis buildings with historical interest was made at a meeting of the St. Louis Chapter of the American Institute of Architects. The suggestion regarding the foundation of a fund included the formation of a lay society, exclusive of architects, which would have as its object the preservation of structures considered monuments to the city's history. A paper, written by the late Cass Gilbert, New York architect, before his own death, memorialized Thomas Crane Young, architect, who died March 2. One of the notable achievements of Mr. Young was said to be the Masonic Temple of St. Louis, described as "among the most important monumental buildings of America as a work of great beauty."

Three of the five architects appointed by the Joint Committee of Architectural Societies in the metropolitan area to act as professional advisers to the New York Municipal Housing Authority are members of the New York Society of Architects and active in the organization. They are James F. Bly, past president and now chairman of the State Legislation Committee of the Society; Matthew W. Del Gaudio, a member of the Multiple Dwelling Law Committee; and Arthur C. Holden. The other professional advisers are Harold Shreve and William Lescaze.

The American Institute of Steel Construction has decided to endow a Research Fellowship at Lehigh University, Bethlehem, Pa., which goes into effect immediately and will be extended over a period of two years. The work will relate to research on steel floor construction and will involve the design of battledeck floors, made of flat steel plates welded to steel beams, to carry concentrated live loads. The investigation will be carried out under Professor Inge Lyse of the Department of Civil Engineering at Lehigh in consultation with the Technical Research Committee of the American Institute of Steel Construction. The personnel of this committee includes Aubrey Weymouth of Post and McCord, Inc.; Jonathan Jones of McClintic-Marshall Corp.; J. R. Lambert of Phoenix Bridge Co.; Dr. O. E. Hovey of the American Bridge Co.; H. G. Balcom, Consulting Engineer of New York, and F. H. Frankland of the American Institute of Steel Construction.

IN THIS



CHILDREN'S WORKROOM

MARSHALL FIELD GARDEN APARTMENTS, CHICAGO

BELOW - THE FIELD BUILDING, CHICAGO



Hedrich-Blessing

SPECIAL BUILDING TYPES . . .

Favorable comment on a previous issue of The Architectural Record devoted to Special Building Types has encouraged the preparation of the supplementary Portfolio of Building Types that appears in this issue. In selecting this material we have been guided by the principle of "use to the architect." Helpful information has therefore been added to our illustrations to aid in interpreting the plans and with indication of procedure in developing such projects as a market, a funeral home or specialized hospital.

ELECTRICITY IN THE HOME . . . By HENRY L. LOGAN

The second installment of house wiring appears in this issue. Mr. Logan considers the number of kilowatts of electrical current that are required to adequately illuminate rooms of a house by different kinds of fixtures. The tables should assist the architect and also the owner in determining method of lighting that is economical and desirable. Typical plans have been prepared with outlets for all rooms. These can serve as a guide in lighting layout for houses of average arrangement.

NEXT MONTH:

The August issue will feature school buildings, with special attention given to those types for which a need exists. New trends in school planning will be discussed and illustrated. Many schools are remodeled taday, both for necessary reconditioning and in order to gain added classroom space. There will be an article with comment on methods followed in modernizing a school.

OTHER FEATURES:

- -Photo-murals by Margaret Bourke-White
- -The Field Building, Chicago
- -School and Recreation Facilities for Garden Apartments
- -Recent Building Trends

Columbia Reorganizes Teaching of Architecture

A wider consciousness of the social order and a greater dependence on scientific progress will govern a new system of teaching in the School of Architecture of Columbia University next year, according to an announcement by Dean Joseph Hudnut.

"It is evident that the rôle of architecture in the new world which is in process of formation will be different from the rôle of architecture in the world that is passing away," Dean Hudnut said in describing the two fundamental principles upon which the reorganized curriculum will be based. "We should be most negligent should we not make some attempt to foresee and to anticipate the needs of the architect in the coming scheme of things.

"When the students who are now in our classes look back after twenty years to our present efforts, they will not judge us too severely if we fail to apprehend all of this new world; but their judgments upon us will be harsh indeed if we do not make at least some effort to look ahead—to arm them to the best of our ability against those dangers which they must face.

"They will not blame us so much for lack of vision where all the world is dark, as they will for lack of courage and of action—for a complacency, which, in the face of a world's catastrophe, persists in the mere repetition of inherited formulas. There is only one procedure which they will not forgive, and that is an entrenchment behind the walls of tradition and habit, where, heedless of their urgent necessities and deaf to the human anguish around us, we give no thought to that new environment in which they are to live.

"The teaching at Columbia will be reorganized upon two principles. First, the architect of the future must have a greatly wider consciousness of the social order in which he lives and a deeper understanding of social and economic law. The architect of the future will be directly concerned, not with the comfort of individuals or with the abstract beauty of the great façades of public buildings and cathedrals, but rather with an immediate and exigent desire to improve the environment of the human race.

"In the second place, I believe that the architect of the future will desire to take a much wider advantage of scientific progress, of technical invention and production, than the architect of the past. His absorbing interest will be to make use of technical invention and production for the creation of a more healthful and pleasant and homogeneous form of life, and he will be therefore more interested in new processes and new materials than in processes and materials which he has inherited. His attitude will be a scientific one, like that of a chemist or an engineer, and to this scientific attitude sentiment will be inevitably subordinated.

"If these principles are to guide us, we must accept all of their implications in the formation of the curriculum of our School. We must introduce into this curriculum every discipline which can fit the architect to this new responsibility, and we must resolutely remove from the curriculum all processes which interfere with, or tend to defeat, the kind of training consistent with this new rôle.

"The first thing to do is to make sure that the preparation for the practice of architecture includes a wider acquaintance with the social and economic sciences. Before the student takes up the study of design he must have some broad understanding of the nature of the civilization in which he is to practice—its character and its structure, its history, and the intellectual currents which underlie and direct it.

"It is for this reason that we wish to prescribe, rather than to leave to chance, the kind of courses which a student in the college will take as a preparation for architecture, and it is for this reason that, with the Dean of the College, a combined course is being worked out in which the student in college will consciously lay the foundation, by the study of sociology and economics, for his subsequent professional training."

Kohn Resigns PWA Housing Post

On June 13, Robert D. Kohn handed to Secretary Ickes his resignation as Director of the Public Works Housing Division.



APARTMENT HOUSES AT CENTRAL PARK, NEW YORK CITY PHOTOGRAPH BY SAMUEL S. GOTTSCHO

T H E

ARCHITECTURAL RECORD

VOL. 76. NUMBER I

JULY 1934

THE NEW HOME MORTGAGE MARKET

by

M. A. MIKKELSEN

The National Housing Act, apart from Administrative provisions, is in the main identical with the bill originated by the National Emergency Council and submitted to the Congress with a message from the President. The principal features of the bill as summarized by Frank C. Walker, Executive Director of the Council, were published in the June issue of this magazine. The National Housing Act completes a program for reorganization of the home mortgage market, for relief of home owners in default on mortgages and of lending institutions embarrassed by frozen home mortgages, and for stimulation of employment through modernization of homes.

The program was inaugurated by the Federal Home Loan Bank Act of July 22, 1932, followed by the Home Owners' Loan Act of June 13, 1933, both of which have been variously amended and supplemented to permit extensions in scope of the program of reorganization, relief and stimulation.

THE OWNED HOME IN FINANCE AND IN CONSTRUCTION

How important to the architectural profession and to the building industry is a program limited in direct benefits to owned homes not exceeding \$20,000 in value? Perhaps the best approach to an answer is the evidence presented at the hearings before the Senate Committee on Banking and Currency. The following table, compiled from "The Internal Debts of the United States," a survey financed by the Twentieth Century Fund and published by the Macmillan Co. in 1933, was repeatedly cited wholly or in part.

THE NATIONAL DEBT STRUCTURE

Mortgage debt:	
Home mortgages	\$21,000,000,000

Other urban mortgages Farm mortgages	
Tarm moregages	8,000,000,000
Total	\$43,000,000,000
Federal debt	26,000,000,000
State and local debt	
Industrial debt	
Public utility debt	
Railroad debt	

There were in 1930, according to the Bureau of the Census, 10,503,386 owned non-farm homes in the United States (continental area), of which 354,337 were valued at \$20,000 or more. The average value of all owned non-farm homes was \$4,778.

The next table is reproduced because it explains why accepted methods and principles of the mutual building and loan association play so prominent a part in the reorganization of the home mortgage market. It is understood that the tables are estimates from different sources, which accounts for the difference in the figures given for the total home mortgage debt (\$21,-000,000,000 in the first table and \$21,500,000,-000 in the second).

HOME MORTGAGE HOLDINGS

Building and loan associations	\$6,500,000,000
Individuals	4,000,000,000
Mutual savings banks	3,500,000,000
Mortgage companies	3,000,000,000
Banks	2,500,000,000
Insurance companies	2,000,000,000

As to the relative importance of the owned home in construction, no clear picture is obtainable from the committee hearings. In the 1930 Census one-family dwellings constituted 84.3 per cent of all non-farm dwellings. If, in order to employ construction statistics conveniently available, one- and two-family dwellings are taken as representing dwelling construction (as

opposed to apartment construction), no important statistical error is likely to result, although the new mortgage legislation includes threefamily dwellings as homes and, in some instances, also four-family dwellings. In 1925, a year in which presumably a normal relationship of activity prevailed between the main classes of construction, one-family and two-family houses constituted 26 per cent in dollar value of the total volume of building construction. The contracts let for these houses totaled \$1,300,000,000 in the Dodge Reports territory, to which should be added an estimated \$200,000,000 for the States outside that territory, making \$1,500,-000,000 for the continental area of the United States. However, no factual information is available for estimating the proportion of these houses that were built for owner occupancy.

THE HOME MORTGAGE MARKET AS REORGANIZED

The reorganization is based upon the following principles: 1. discount facilities, 2. amortized (self-liquidating) mortgages, 3. mortgage insurance, 4. insurance of individual savings accounts up to \$5,000 (represented by shares and certificates) in building and loan associations, 5. Federal savings and loan associations, 6. national mortgage associations, 7. the sale of bonds secured by mortgages to attract new capital and 8. Federal control or supervision, mainly through the Federal Home Loan Bank Board, of institutions authorized to function within the market.

THE FEDERAL HOME LOAN BANK SYSTEM

This is similar in purpose and operation to the Federal Reserve System, except that it is confined to home mortgage finance. It has twelve regional home loan banks, each of which serves, with some exceptions, only member institutions. Eligible for membership are building and loan associations, savings and loan associations, cooperative banks, homestead associations, insurance companies and savings banks which meet the requirements stated in the Federal Home Loan Bank Act. The Act throws the weight of its influence towards promoting the use of amortized mortgages by permitting a regional bank to lend more money on such mortgages than on straight mortgages when a member institution applies for a loan. The system on May 31, 1934, had 2,501 member institutions, comprising 2,292 building and loan associations, 3 life insurance companies, 55 cooperative banks, 126 Federal savings and loan associations, and 16 homestead associations. Their home mortgage assets are estimated at some \$3,000,000,000. They hold 197,426 shares of stock in the regional banks, which entitles them to a line of credit of \$231,859,642, of which they have borrowed

about one-half.

Each regional bank (or the twelve regional banks as a group) may issue bonds and debentures secured by mortgages valued at 190 per cent of the issue.

FEDERAL SAVINGS AND LOAN ASSOCIATIONS

About one-half of the counties in the United States have no local home financing agency of any kind. Of 10,997 building and loan associations, 2,292 have so far met the requirements for membership in the Federal Home Loan Bank System. A Federal savings and loan association is a local, mutual savings institution similar to the general type of building and loan association except that it operates under a Federal charter and under supervision and regulation of the Federal Home Loan Bank Board. It is a private institution, although the Federal Government invests in its shares. The Federal Savings and Loan Division of the Federal Home Loan Bank Board has appointed some thirty trained home financing specialists to cooperate with the regional home loan banks both in organizing Federal savings and loan associations and in converting thrift institutions now under State charter into Federal savings and loan associations, which automatically become members of the Home Loan Bank System. Establishment of Federal savings and loan associations was authorized by the Home Owners' Loan Act of June 13, 1933. According to the latest press release at hand, 314 such associations have been organized in 34 States with \$38,079,129 in private share subscriptions. Recently the original restriction of investment by the United States Treasury to \$100,000 in the shares of any one association has been amended to permit an investment of 75 per cent of the total capital paid in by the Government and other shareholders, so as to facilitate conversion of the larger State chartered thrift associations.

At the committee hearings it was pointed out that, while the State chartered associations were not yet in a position, generally speaking, to lend money for new home construction, Federal savings and loan associations are making loans for that purpose.

NATIONAL MORTGAGE ASSOCIATIONS

Among the functions of these privately owned and operated corporations, authorized by the National Housing Act, subject to supervision by the Federal Housing Administrator, are (1) to deal in insured home mortgages and (2) to manage properties acquired or turned over to them as the result of foreclosure proceedings. They may sell bonds or debentures secured by insured mortgages, thus enabling them to attract

funds from financial centers where there is a surplus of capital for investment to areas in which the local cost of home financing is unduly high.

FEDERAL MUTUAL MORTGAGE INSURANCE CORPORATION

Created by the National Housing Act as an instrumentality of the United States supervised by the Federal Housing Administrator, the Corporation is to have a capital stock of \$10,000,-000, subscribed for by the Secretary of the Treasury, out of which to pay initial expenses. The insurance fund is contributed by the mortgagees on an actuarial basis. The Administrator is authorized to insure amortized home mortgages up to \$16,000 or up to 80 per cent of the appraised value. He may prescribe terms as to maturities, interest rates, the application of periodic payments to the amortization of principal, insurance, repairs, alterations, payment of taxes, default reserves, delinquency charges, foreclosure proceedings, anticipation of maturity, additional and secondary liens and the like. The interest rate on mortgages is not to exceed 5 per cent on the principal obligation outstanding at any time unless the Administrator finds that in certain areas or under special circumstances the mortgage market demands a higher rate, not to exceed 6 per cent.

The premium charge for insurance of mortgages is not to be less than ½ of 1 per cent nor more than 1 per cent of the original face value, and is to be payable annually in advance by the mortgagee.

Provision is made for the classification of mortgages and the establishment of separate groups to which mortgages having substantially similar risk characteristics and maturity dates are to be assigned.

It also is provided that the Administrator may insure first mortgages covering property held by Federal or State instrumentalities, private limited-dividend corporations and municipal corporate instrumentalities of one or more States formed for the purpose of providing housing (up to \$10,000,000 in individual projects) for persons of low income, which are regulated or restricted by law or by the Administrator as to rents, charges, capital structure, rate of return or methods of operation. Such mortgages need not conform to the eligibility requirements of other mortgages.

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION

The committee hearings stressed the fact that even sound building and loan associations had no money to lend for new home construction because depositors were cashing shares and certificates in order to transfer their savings to insured banks. To check the flow of savings away from long-term investment institutions, the National Housing Act provides for insuring accounts of members of the regional home loan banks, except savings banks. Each eligible institution is entitled to insurance up to 80 per cent of the withdrawable or repurchasable value of its accounts, but no depositor of the institution shall be insured in excess of \$5,000.

The Savings and Loan Insurance Corporation is under direction of the Home Loan Bank Board.

ARCHITECTS UNDER THE REORGANIZATION

One of the major features of the plan for reorganizing the home finance market is the preference accorded to the amortized mortgage over the traditional short-term mortgage payable in full on maturity. The Federal Home Loan Banks permit larger advances to member institutions on amortized mortgages than on straight mortgages; the Federal savings and loan associations make loans exclusively on amortized mortgages; the Federal Mutual Mortgage Insurance Corporation insures none but amortized mortgages; and the national mortgage associations are permitted to deal only in insured (and consequently amortized) mortgages.

The amortized mortgage preferred or required by these Federal institutions bears a low rate of interest, from 5 to 6 per cent, and may cover up to 80 per cent of the value of the property, a coverage designed to eliminate the customary junior mortgages and building loans. If this form of mortgage, being insured and in other ways protected by the Government, attracts the bulk of private investment capital going into future home construction, it is evident that more houses will be built by intending occupiers, which will it would seem increase the number of prospects for architectural services.

RELIEF MEASURES

These have taken two forms, namely (1) RFC loans to mortgage lending institutions and (2) refinancing of defaulted home mortgages by the Home Owners' Loan Corporation.

It is perhaps an indication of the merits of the amortized mortgage that RFC loans to building and loan associations, which use this mortgage generally, are smaller, both absolutely and relatively, than those to mortgage companies. On December 31, 1933, RFC loans to building and loan associations totaled \$66,237,000, having substantially decreased during the year, while the loans to mortgage companies amounted to \$177,845,000, having greatly increased during the year.

The National Housing Act authorizes an increase in the borrowing power of the Home Owners' Loan Corporation through sale of bonds so as to provide \$2,700,000,000 for refinancing mortgages and \$300,000,000 for repairs and modernization of homes covered by refinanced mortgages, all of which are of the amortized type.

MODERNIZATION

The reasoning in support of the credit arrangement for modernization presented at the committee hearings was something like this: According to the National Industrial Conference Board, the number of unemployed in March, 1934, was 8,021,000, as against 13,203,000 in March, 1933. There were about 400,000 workers in the consumer goods industries unemployed, about 1,500,000 in the durable goods industries, about 2,000,000 in the building trades, and the rest—about 4,100,000—in trade, transportation, service, agriculture and so on. Reemployment in the miscellaneous group and in the durable goods industries group depends mainly upon recovery of the building industry.

The purpose of the credit plan for modernization is to promote a considerable immediate reemployment in the building trades, in the expectation that the reorganized home mortgage market will provide enough credit next year to take care of such new construction of dwellings for owner occupancy—mainly one- and two-family houses—as may be warranted by supply and demand.

The credit plan incorporated in the National Housing Act contemplates a private expenditure of \$1,000,000,000 under contract before January 1, 1936. The credit is secured mainly by installment notes payable in one to five years. The individual loan may not exceed \$2,000, but may be obtained for any kind of property, provided it is to be used for alterations, repairs and improvements. As the Government insures accredited institutions which hold such notes to the extent of 20 per cent of their holdings, the insurance fund amounting to \$200,000,000, it is understood that committees of architects, engineers and others will be appointed in each community to pass on the contracts for the Government, although the Act does not make this procedure obligatory.

The fund is to be administered by the Housing Administrator who may establish such agencies, accept and utilize such voluntary and uncompensated services, utilize such Federal officers and employees and such state and local officers and employees as he may find necessary and may prescribe their functions.

The Administrator is authorized upon such terms and conditions as he may prescribe to insure banks, trust companies, personal finance companies, mortgage companies, building and loan associations, installment lending companies and other such financial institutions against losses which they may sustain as a result of loans and advances of credit made by them subsequent to the date of enactment of the Act and prior to January, 1936, or such earlier date as the President may fix by proclamation, for the purpose of financing alterations, repairs and improvements upon real property.

The committee hearings explain why such comprehensive discretionary power was conferred upon the Administrator. Each of the many different kinds of lending institutions which it is hoped will support the plan is governed by specialized Federal or State legislation, so that a particular procedure will have to be worked out for each type of institution.

Until the Administrator has interpreted the Act in its bearing on administrative detail it is impossible to know whether architects will be allowed to organize jobs without assuming the responsibility of general contractors on the notes.

CONCLUSION

Without attempting to forecast results for the program of reorganization, relief and stimulation which has been briefly outlined, it may be suggested (1) that it applies to the section of the building industry which led in the decline, the peak in new construction of one- and twofamily houses having been touched as far back as 1928, (2) that house repairs have been neglected for a number of years, as may be inferred from the real property inventory of 64 cities conducted under the auspices of the Bureau of Foreign and Domestic Commerce, and (3) that the reorganization of the home mortgage market is of a kind calculated by its designers to restore the confidence of investors in bonds of that market. The fundamental principles of the reorganization—amortized home mortgages securing loans by mutual thrift associations with power under prescribed conditions to issue bonds against such mortgages—have been approved by experience, partly in America but more generally abroad. According to John H. Fahey, Chairman of the Federal Home Loan Bank Board, about 20 per cent of all funds invested in England pass into the shares of building societies, with the result that scarcity of home mortgage money has not been a serious problem there even during the depths of depression since the

PORTFOLIO

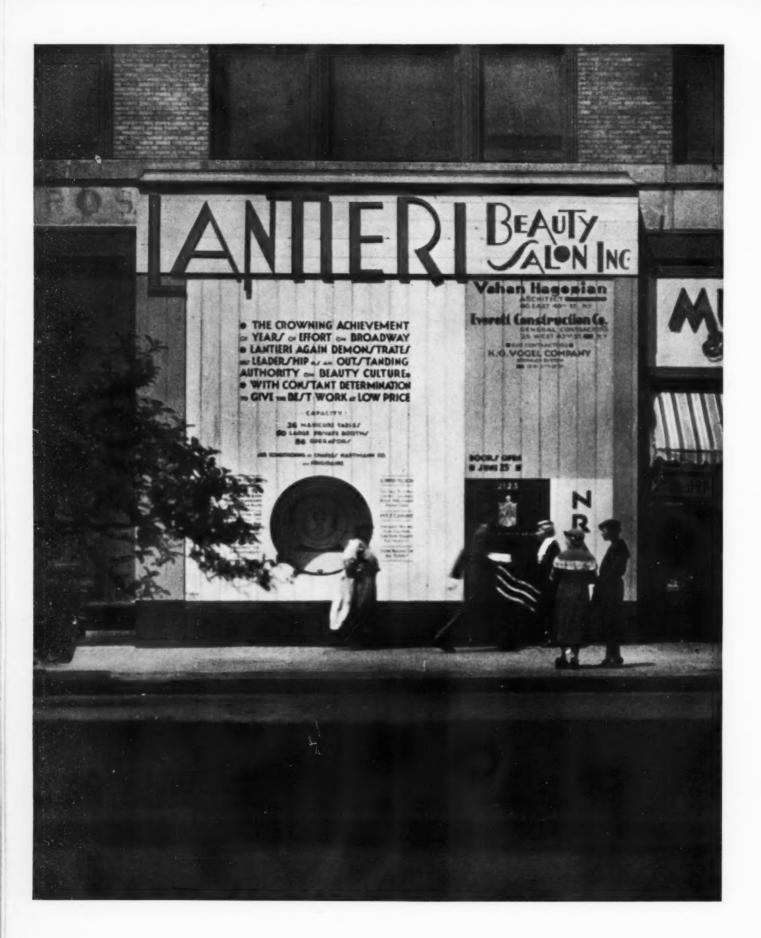
SPECIAL BUILDING TYPES

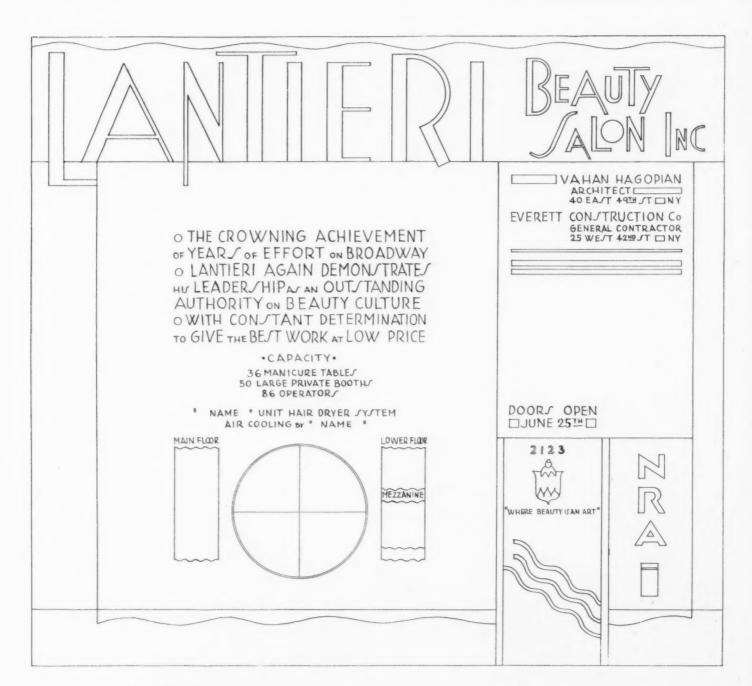
NEW WORK

- Rainbow Angling Club, Azusa, California. Gordon B. Kaufmann,
- A Tuberculosis Sanatorium, Paimoni, Finland. Alvar Aalto, Archi-
- The Medical School Clinics, the University of California, San Francisco, California. William C. Hays, Architect.
- A Tuberculosis Sanatorium. Ernest Weissmann, Architect.
- A Rural Health Station. Howard T. Fisher, Architect.
- Sabinas Brewing Company, San Antonio, Texas. Charles T. Aubin, Architect.
- Two Houses of Concrete Construction, Moderate in Cost,
- Apartment House Development, Arlington County, Virginia. Andrew J. Thomas, Architect.
- El Karubah Club House, Cross Lake, Louisiana. Jones, Roessle, Olschner and Wiener, Architects.
- Lutz Funeral Home, Reading, Pennsylvania, Elmer H. Adams, Architect.
- Planning the Funeral Home. By Elmer H. Adams of Weidner and Adams, Architects,
- Automobile Shopping Centers. By B. Sumner Gruzen, Architect.
- Lighting Large Shopping Centers. By H. W. Desaix, Watson Flagg Engineering Company.
- Y. W. C. A. Building. Williamsport, Pennsylvania. Lawrie and Green, Architects.
- Headquarters Hut for Admiral Byrd in the Antarctic. Victor H. Czegka, Designer.
- A Self-Service Ice Vendor Near Los Angeles.
- Roadside Diners for Motorists. Designed by Stanley Nelson and Charles Porter, Under the Direction of Kem Weber, Art Center School, Los Angeles.

MODERNIZATION

- A Construction Barricade Lantieri Beauty Salon, Inc. Vahan Hagopian, Architect.
- A Hotel Bar, Buenos Aires. Rocha y Martinez Castro, Architects.
- Private Office of Gordon Reed, Hanley Company, New York City. V. Hagopian, Architect.
- Tru-Food Restaurant, New York City. H. V. St. George, Architect.





6" 1 2 3 4 5 6 7 8 9 IOFT

A CONSTRUCTION BARRICADE

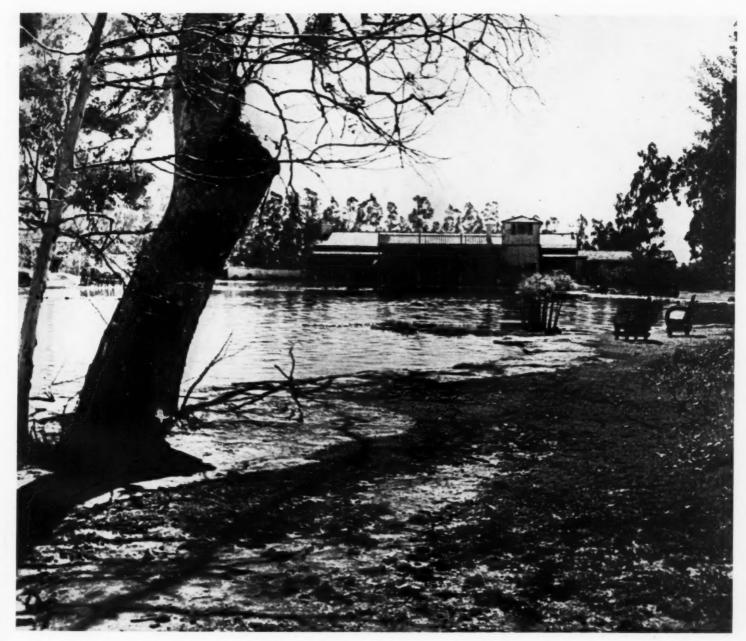
V. HAGOPIAN, ARCHITECT

THIS temporary barricade was erected as a screen during the reconstruction of a store building. A circular show window served for display during the alteration.



INTERIOR OF CLUB ROOM

RAINBOW ANGLING CLUB, AZUSA, CALIFORNIA GORDON B. KAUFMANN, ARCHITECT



GENERAL VIEW

Cooking Space Cooking Space Cooking Space Cooking Space

Pared Terrors

Pared

FIRST FLOOR PLAN



Photos by Wm. A. Clarke

TERRACE ON LAKE

RAINBOW ANGLING CLUB, AZUSA, CALIFORNIA GORDON B. KAUFMANN, ARCHITECT



ELEVATION TOWARD GARDEN



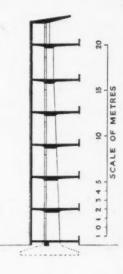
A TUBERCULOSIS SANATORIUM, PAIMONI, FINLAND ALVAR AALTO, ARCHITECT

PLOT PLAN

KEY TO PLOT PLAN AT LEFT:

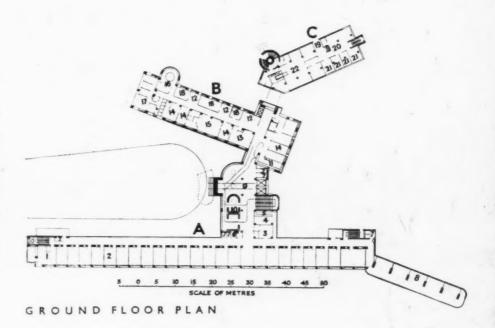
A, B, C shown on plan below; D, power house block; E, houses for doctors; F, houses for employees; G, garage; H, gardens for use of patients; Wing A contains patients' rooms with S. S. E.

A SECTION THROUGH ONE OF THE WINGS SHOWING A CENTRAL COL-UMN WITH SPREAD FOOTING.



GROUND FLOOR.—Wing A. 1: Nurses' quarters. 2: Patients' rooms. 3: Divisional day rooms with glass walls. 4: Washing room, utensils, general cleaning and disinfection. 5: Laundry. 6: Sputum analysis room in two divisions, with double lift to sterilizing room on the first floor. 7: W.C.'s, urinals, bidets, footbaths, etc. 8: "Lying halls" for the more serious cases. 9: The entrance hall. 10: Shoe changing room. Wing B, 11: Porter, post office, wireless, telephone exchange, etc. 12: Waiting niches for patients in corridors. 13: Administration rooms and doctors' consulting rooms. 14: Doctors' room. 15: X-ray. 16: Operation theater. 17: Therapy. 18: Laboratories, dentists' and apothecaries' rooms. Wing C. 19: Entrance for provisions and for kitchen and bakery. 20: Sorting room for provisions. 21: Cold storage. 22: Bakery. Wing D. 23: Power House. 24: Boilers. 25: Tunnel for coal trucks. 26: Shower.

THE DRAWINGS AND PLANS THAT ILLUSTRATE
THIS SANATORIUM WERE PREPARED BY THE
ARCHITECTS' JOURNAL, LONDON, AND REPRODUCED WITH PERMISSION OF THAT JOURNAL.



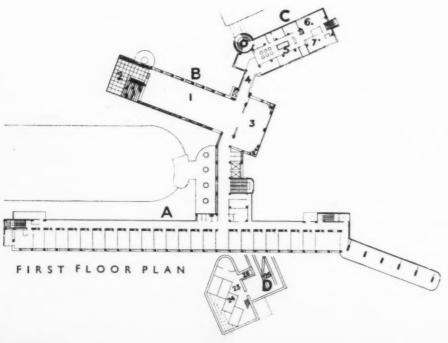
his hospital in southwest Finland is in an isolated location and so was planned as a self-contained community.

The Sanatorium building was built with regard to orientation to the sun and an openness of wall so as to permit the entrance of ample light and air. The building is of concrete framework. The use of cantilever construction made possible the adoption of superficial wall faces without obstructing columns. Balconies also are cantilevered and project out and into the sun. A part of the building group is supported on central columns with spread footings which serve as a stem from which the floors project.

Because of the self-contained character of the Sanatorium, provision is made for housing doctors, nurses and other employees on the grounds. There is a wooded park and gardens for the use of patients.



GENERAL VIEW OF WING A AND UNIT CONNECTING IT WITH WING B

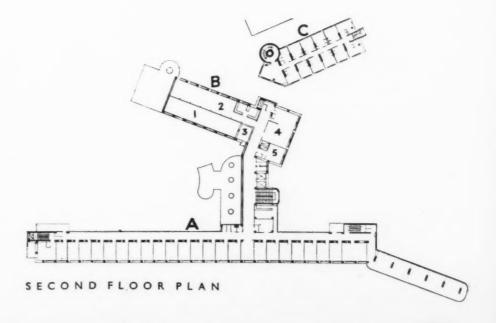


FIRST FLOOR.—Wing A. As on the ground floor.
Wing B. 1: Dining hall. 2: Summer terrace with pergola, etc. 3: Recreation room. 4: Service room. Wing
C. 5: Kitchen with refrigerators, cloakrooms, etc., housekeeper's glorage room for flour, sugar, cold and warm foods, and scullery. 6: Staff dining room. 7: Housekeeper's quarters.



STAIRWAY IN UNIT CONNECTING WINGS A AND B

SECOND FLOOR.—Wing A. As on the ground floor. Wing B. 1: Upper part of dining room. 2: Reading room and library. 3: Cinema projector room. 4: Dining and recreation rooms for nurses. 5: Guest rooms. Wing C. "Hotel" for staff with assembly room in the angle.



SANATORIUM SPECIAL BUILDING TYPES

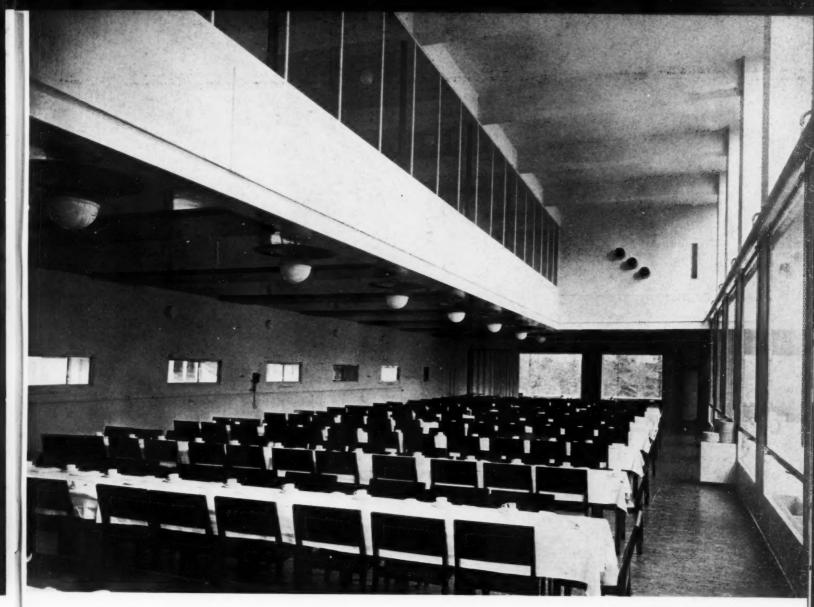


VESTIBULE OFF MAIN COURT

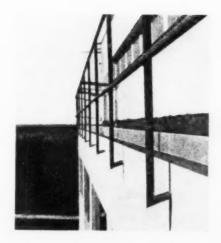
A TUBERCULOSIS SANATORIUM, FINLAND ALVAR AALTO, ARCHITECT

5: A RUBBER THRESHOLD FOR DOORS, ALLOWING CLOSE SHUTTING AND AT THE SAME TIME ENABLING TROLLEYS TO BE RUN OVER IT.

6: THE STANDARD ZINC SKIRTING, WHICH FITS TIGHTLY AGAINST FLOOR AND WALL FINISH. METAL SCREWS TITT FLOOR RUBBER DOOR STOPS TO ALLOW TROLLEYS

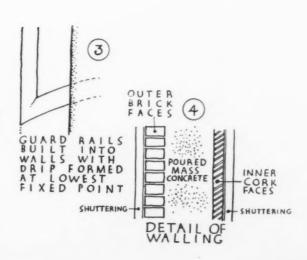


PATIENTS' DINING ROOM



3: GUARD RAILS DE-SIGNED TO THROW OFF THE RAIN WATER, AND PREVENT STAINING OF THE WALL SURFACE.

4: THE STANDARD WALL CONSTRUCTION.

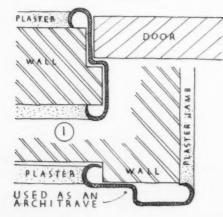




PATIENTS' READING ROOM ON SECOND FLOOR

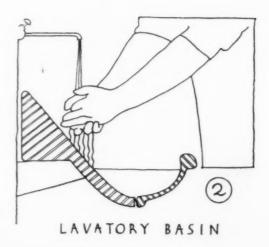
A TUBERCULOSIS SANATORIUM, FINLAND ALVAR AALTO, ARCHITECT

METAL DOOR LINING



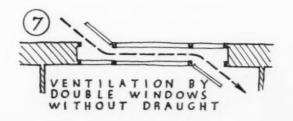
1: THE STANDARD ZINC SECTION, USED BOTH AS DOOR LINING AND ARCHITRAVE.

2: THE WASH - BASIN SPECIALLY DESIGNED TO PREVENT SPLASHING AND NOISE.





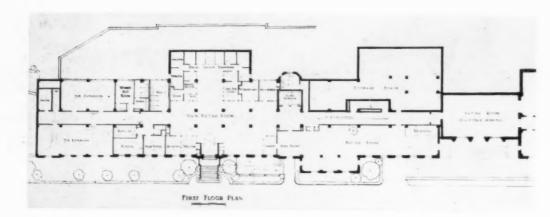
INTERIOR STAIRWAY DETAIL



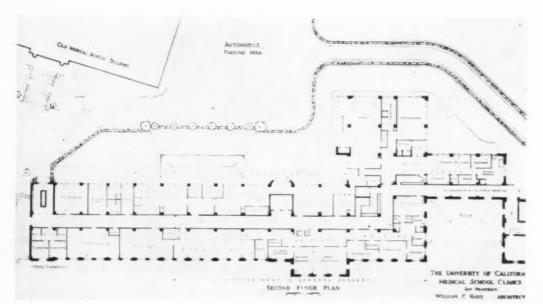
7: DOUBLE WINDOW WITH DRAUGHT-LESS VENTILATION, USED IN THE BED-ROOMS.

THE MEDICAL SCHOOL CLINICS, THE UNIVERSITY OF CALIFORNIA SAN FRANCISCO, CALIFORNIA

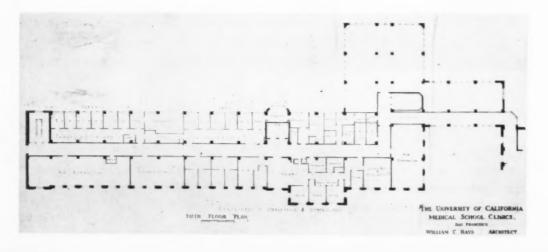
WILLIAM C. HAYS, ARCHITECT



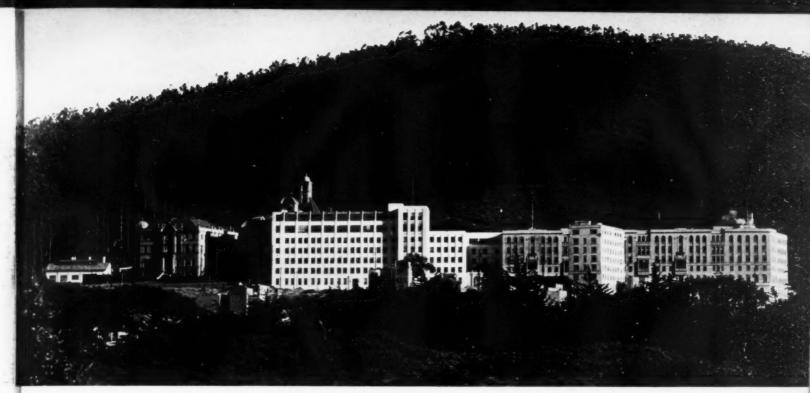
FIRST FLOOR PLAN



SECOND FLOOR PLAN



FIFTH FLOOR PLAN



TREES OF GOLDEN GATE PARK—SUTRO FOREST IN THE REAR

"HE eight floors of the building combine the medical and dental clinics with approximately 200,000 and 50,000 yearly out-patient visits, respectively. Each floor of the clinics corresponds, in so far as possible, to the same floor of the hospital wards in the connecting building (the University of California Hospital) devoted to similar branches of medicine or surgery.

The structure complete encompasses about 100,000 square feet of superficial floor area. The ground floor houses the record room with its 240,000 case reports, pharmaceutical dispensary, alcohol and drug storage vaults, laboratory and machinery rooms. Contiguous to the main waiting room (2,200 sq. ft. in area) on the first floor are examination rooms for admissions and the social service headquarters. A separate record room for the University Hospital is also maintained on this floor. The second floor provides space for the surgical and some of the surgical-specialty clinics. The Physical Therapy Department is also on this floor, a feature of which is a large therapeutic pool and a solarium for patients suffering from muscular defects. The third floor is devoted to the eye, ear, nose and throat clinics, the dermatological and lues clinics, and the urological clinics. General medicine, psychiatry and neurology clinics are concentrated on the fourth floor, and women's clinics and children's clinics are placed on the fifth floor. The sixth and seventh floors hold the dental clinics with more than ninety (90) chairs in the two main operatories, plus individual examining rooms, laboratories, offices for the staff, etc. These two upper floors have a fourteen-foot height with windows on the north extending to the full height and cut only by structural columns. All services to the dental units are run in waterproofed concrete trenches under the floor, which finish flush with steel plates for access.

Structural Data: The building has a 293-ft. frontage with a depth varying from 46 to 99 feet and contains 800 tons of structural steel. The building adjoins the



MEDICAL SCHOOL CLINICS. UNIVERSITY OF CALIFORNIA SAN FRANCISCO, CALIFORNIA WILLIAM C. HAYS, ARCHITECT

VIEW INTO SOUTHEAST ANGLE SHOWING OLD AND NEW MEDICAL SCHOOLS

occupied University of California Hospital, making the reduction of construction noises an important feature in design and erection. To meet this condition the architect and the engineer, Walter L. Huber, turned to electric welding in the field work. Connections for all lateral loads, including seismic forces, were arc welded, and direct loads were carried on shop-riveted connections. The design provides for the resistance of a seismic force as well as a permanent lateral earth pressure resulting from the topography of the site which slopes three stories in the thickness of the building.

All columns were connected by steel girders spanning from 16 to 18 feet and panels between columns were subdivided by reinforced concrete beams giving concrete floor slabs of moderate span. All welds were 3/8 fillet welds and 150,000 linear inches were required, including 5,000 inches of shop welds. NORTH SIDE





THE SOUTH ELEVATION OF NEW MEDICAL SCHOOL CLINICS

All permanent field bolts were 1/8 inch, and were machined to afford practically a driving fit.

General Architectural Data: The building is incomplete as designed, in its present status, due to a last minute slash of 40 per cent in the appropriation amount. The easterly tower and wing to contain administrative offices and classrooms, with the entrance proper in its façade, was arbitrarily vignetted and provisions made for a structural "hook-up" at such time as further moneys are made available.

Exterior Finish: Waterproof cement paint on concrete.

Sash: Heavy section steel - combined casements and vented sections.

Entrance: Travertine steps and walls with stainless steel storm vestibule.

Rear Fenestration: Sash extends vertically from sill

MAIN ENTRANCE





MEDICAL SCHOOL CLINICS, UNIVERSITY OF CALIFORNIA SANFRANCISCO, CALIFORNIA WILLIAM C. HAYS, ARCHITECT

LEFT: DETAIL OF DENTAL OPERATION ROOM AT SEVENTH FLOOR.

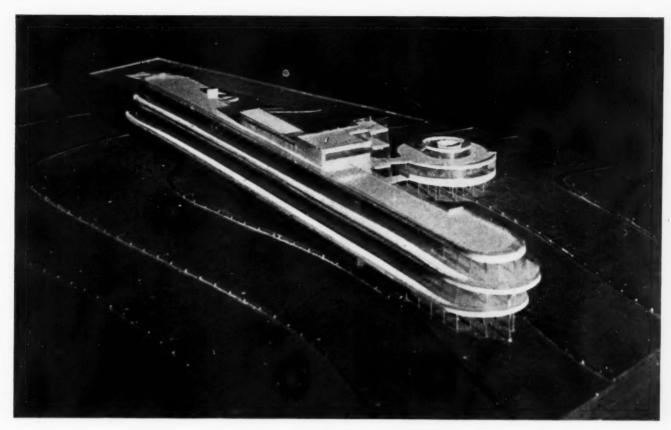
BOTTOM: DETAIL AT SEVENTH FLOOR —
NORTH SIDE.

height to soffit of overhead beam and horizontally from structural column to structural column with special mullions designed to take a 21/4-inch partition, thereby giving extreme flexibility to room planning.

Interior Finish: All partitions are plaster on metal lath and steel studs. Finish is enamel on hardwall plaster and/or Keene's Acoustic plaster on ceilings and walls of all areas where sound absorption was deemed desirable. Rubber tile floor in main waiting areas and operating room. Glazed, sandblasted tile floors in all areas where water might be present. Marble toilet partitions. Glazed tile wainscots in special purpose rooms and throughout Physiotherapy Department. Hollow metal base throughout, except in corridors and large areas where linoleum is turned up 5 inches on a 11/2-inch radius cove and capped with hollow metal. Doors: Eastern white oak—stained and lacquered.

Floors: ½ inch battleship linoleum. Radiation: Concealed (generally). Building completed in July, 1933. Cost: Approximately \$450,000 (exclusive of furniture, linoleum and shades).





MODEL OF SANATORIUM

A TUBERCULOSIS SANATORIUM ERNEST WEISSMANN, ARCHITECT

This sanatorium was designed for the care and cure of tubercular patients, particularly patients suffering from tuberculosis of the joints and bones. This project was developed with the closest cooperation of Dr. Miroslav Delic, a tuberculosis specialist.

LOCATION

On the Mediterranean where light and atmospheric conditions were found to be most satisfactory for this type of sanatorium.

ORIENTATION

The architect made a study of the seasonal position of the sun. This determined the terrace arrangement and the direction of the wings where patients are exposed to the sun.

A system of room sizes was followed:

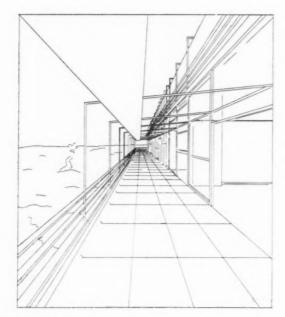
A one-bed room requires a width of 12'-0"

A two-bed room requires a width of 18'-0"

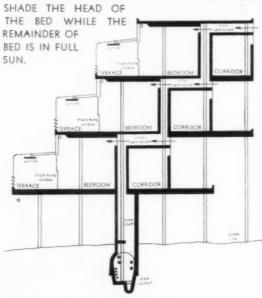
A four-bed room requires a width of 30'-0"

A ten-bed ward requires a width of 65'-0" Depth of rooms is uniformly . . . 15'-0"

Ceiling heights are . . .



VIEW OF SUN TERRACE IN FRONT OF SLEEPING ALCOVES. THE AWNING IS SO PLACED AS TO



SECTION OF TÜBERCULOSIS SANATORIUM SHOW-ING TERRACES AND VENTILATION ACROSS BUILD-ING.

A TUBERCULOSIS SANATORIUM

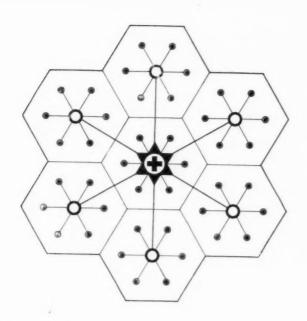
ERNEST WEISSMANN, ARCHITECT

FEATURES IN THIS DESIGN:

- (1) Standardization of all constructive elements. Simplicity of erection and economy of materials.
- (2) Elasticity of interior organization for easy adaptation to medical progress.
- (3) Equipment is prefabricated, readily installed without disturbing structural parts.
- (4) Materials are lightweight with better insulating and acoustical properties than ordinary heavy construction.
- (5) Floor slabs on stilts permit the maximum use of existing ground area. Simplicity of foundation footings (piers).
- (6) The façade to the south is entirely of glass (two sheets with an air space), which has a thermic insulation equal to one foot of brick wall.
- (7) Stairs are replaced by ramps. Easier for patients and makes possible the use of bed wagons.
- (8) All proposed materials have previously proved successful.
- (9) All proposed constructions have been found economical and efficient.



PLAN SHOWING SINGLE BEDROOMS AND WARD. THE WALL TOWARD SUN TERRACE IS EQUIP-PED WITH TRIPLE-HUNG WINDOWS.



DIAGRAMATIC PLAN SHOWING GEOGRAPHICAL AND FUNCTIONAL RELATIONSHIPS OF THE RURAL HEALTH STATION UNITS.

- CENTRAL HOSPITAL UNIT
- INTERMEDIATE UNIT
- BASIC UNIT

A RURAL HEALTH STATION

HOWARD T. FISHER, ARCHITECT*

* Developed by General Houses, Inc.

THE IDEA Hospital and clinic facilities adequate to the needs of the rural sections of this country do not now exist. A coordinated group of such units, properly located and related to one another, would provide a given community with minimum adequate medical facilities.

As the basis for a group of Rural Health Stations, three sized units are proposed:

THE THREE UNITS **EMPLOYED**

- 1. THE BASIC UNIT—to provide living quarters for a visiting nurse and facilities for consultation, examination, and the treatment of emergency cases, a group of such units to be so located that one physician will be able to visit each periodically, maintaining in each regular office hours for consultation.
- 2. THE INTERMEDIATE UNIT—to provide, in addition to the facilities of the Basic Unit, beds for the hospital care and observation of three to five patients, this unit to be centrally located so as to be within easy motoring distance of each of the Basic Units above. The Intermediate Unit serves as a headquarters for the physician. From it his activities radiate.
- 3. THE CENTRAL HOSPITAL UNIT—to provide all the facilities of a small hospital with accommodations for up to nine or ten patients. To this largest unit will be sent all patients for whose treatment the equipment of the smaller units is not adequate.

Each unit is so designed and constructed that it may grow or be more easily moved as the growth of population or other changing conditions may demand.

The plan for the Basic Unit has been designed to provide: THE BASIC UNIT

1. Facilities for consultation, examination, and the treatment of emergency cases.





THE BASIC UNIT

(Continued)

- 2. Living accommodations for a visiting or obstetrical nurse.
- 3. Waiting space for patients.

The plan shows:

- 1. Vestibule-may be omitted in a warm climate.
- Reception Room—serves both as living room for the nurse and as a
 waiting room for patients during consultation hours. A couch may be
 included in the furnishings, so designed as to be convertible into an
 emergency bed.
- 3. Kitchenette—large enough to provide dining space for the nurse when the Reception Room is not available.
- 4. Bath—complete with tub, shower, basin, water closet and cabinet.
- Nurse's Bedroom—an ample room with built-in wardrobe and clothes closet. In an emergency this room is used for the patient and the nurse sleeps on the convertible couch in the Reception Room.
- Consultation and Examining Room—large room with dressing cubicle inclosed with curtain hung from ceiling track, adjustable examining table, coat closet, and built-in combination laboratory (with basin) and desk (with provision for letter files and storage of medical instruments and supplies).
- 7. Linen and Supply Cases off corridor.
- No basement—a small, compact, automatic built-in heating unit, which supplies both hot water and conditioned air, is located off the corridor. (In communities where neither gas nor oil is economically available, a somewhat modified plan will be required.)
- A one-car garage would accompany this unit, either attached or built separately. In communities where transportation must be by horseback, a small stable containing stall and saddle and feed room would be provided.

THE ALTERNATE

BASIC UNIT

The Alternate Basic Unit is offered as an example of minimum planning where

THE ARCHITECTURAL RECORD



ALTERNATE INTERMEDIATE UNIT

utmost economy is required. Very nearly the same facilities are provided with a 28 per cent reduction in floor area.

THE INTERMEDIATE UNIT

The Intermediate Unit provides, in addition to the facilities of the Basic Unit. accommodation for three to five patients.

Starting with the original Basic Unit, the Intermediate Unit is arrived at by simply continuing the corridor and adding rooms at the rear of the building. This can be done either at the time the building is built or later if required. Bedrooms are so arranged that one can be used as a delivery room. When two nurses are required, as would be the case if one were a visiting nurse, one of the rooms here indicated for a patient could be used for the second nurse or the original plan may be expanded to include an additional room.

THE ALTERNATE INTERMEDIATE UNIT

This Alternate Unit is offered as an enlargement, by alteration and addition, of the Alternate Basic Unit. It proposes the addition of two bedrooms (one large enough for two beds) and the alteration of the reception room to permit a separate kitchenette.

THE CENTRAL HOSPITAL UNIT

The Central Hospital Unit provides, in addition to the facilities of the Intermediate Unit:

- 1. Accommodation for additional patients up to nine or ten.
- 2. X-Ray Room.
- 3. Operating Room with adjacent sterilizing room.
- 4. Additional lavatory.
- 5. Enlarged kitchen.
- 6. Accommodation for a second nurse.
- 7. Service Entrance.

This building can be either constructed of this size originally or produced by enlarging one of the smaller units. For example, the Intermediate Unit becomes the Central Hospital Unit by adding rooms and making such a simple alteration as converting the kitchenette into an X-ray room.



CENTRAL HOSPITAL UNIT

THIS IS A FULLY-EQUIPPED HOSPITAL FOR A TOWN OF SMALL SIZE. IT IS SUITED TO ENLARGEMENT BY ADDING ROOM UNITS.







ABOVE:

SUGGESTED APPEARANCE OF BASIC UNIT TO SERVE AS A SMALL-SIZE RURAL HEALTH CENTER

SKETCH OF BUILT-IN COMBINATION DESK AND LABORATORY, A DEM-ONSTRATION OF SPACE ECONOMY ACHIEVED BY CAREFUL STUDY OF REQUIRED EQUIPMENT.

A HOTEL BAR, BUENOS AIRES

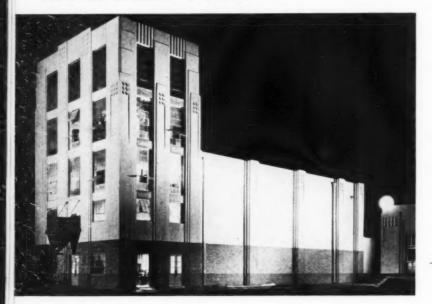
ROCHA Y MARTINEZ CASTRO, ARCHITECTS

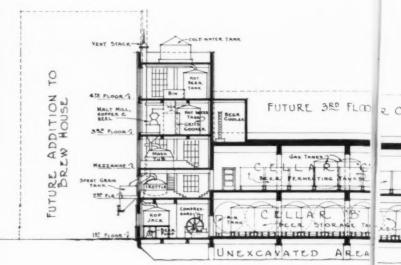
This bar was installed in the modernized Plaza Hotel in Buenos Aires, South America. The walls are of gray oak as are also the tables and furniture. The upholstery of chairs is in bright green leather. The chairs at bar are of polished chromium tubing. Chromium is also used as a trim to the bar. The carpet is of gray with a green band.



SABINAS BREWING COMPANY, SAN ANTONIO, TEXAS

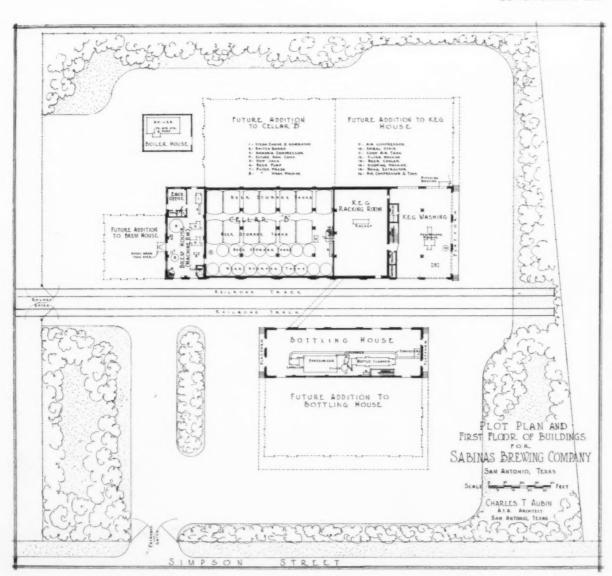
NIGHT VIEW OF EXTERIOR OF BREWERY





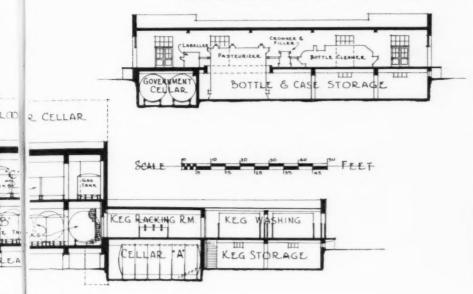
LONGITUDINAL SECTION THROUGH BREW

HOL



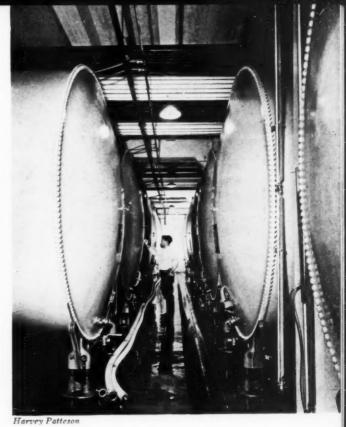
CHARLES T. AUBIN, ARCHITECT

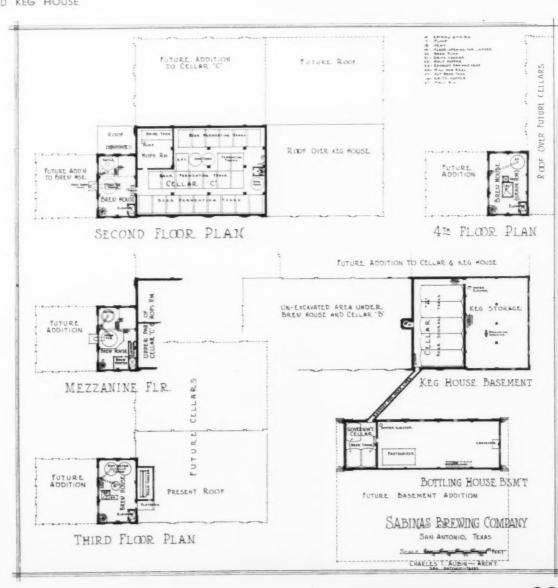
LONGITUDINAL SECTION THROUGH BOTTLING HOUSE

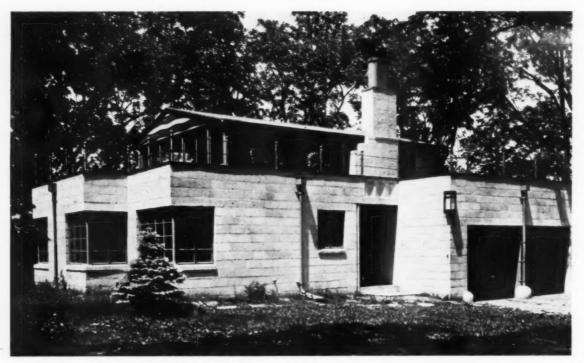


HOUSE, STOCK HOUSE AND KEG HOUSE

EW







HOUSE NEAR DES MOINES, IOWA AMOS B. EMERY, ARCHITECT

TWO HOUSES OF CONCRETE CONSTRUCTION MODERATE IN COST

CAPE COD HOUSE CHARLES M. WILLIS, ARCHITECT



APARTMENT HOUSE DE-VELOPMENT, ARLINGTON COUNTY, VIRGINIA

ANDREW J. THOMAS, ARCHITECT

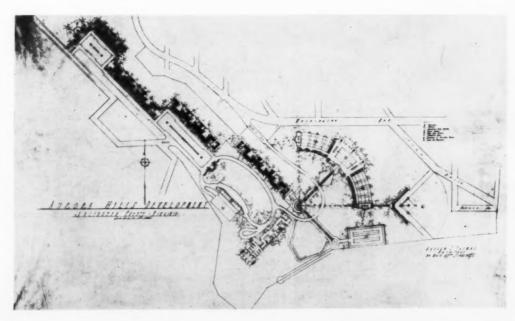


W. F. Roberts Company

Briefly, it is the idea to locate a group of five or six thoroughly up-to-date, fireproof apartment buildings of three to six stories in height near the south end of Arlington Ridge where ideal transportation and sanitary facilities already exist and within fifteen minutes of the center of business and the new Government buildings in Washington.

Located on ground 150 feet above the river and in a grove of trees giving ample shade; with carefully protected and supervised playgrounds for small children, tennis courts, a swimming pool and ball field for the older ones, and all the light and air that less than twenty per cent ground coverage assures.

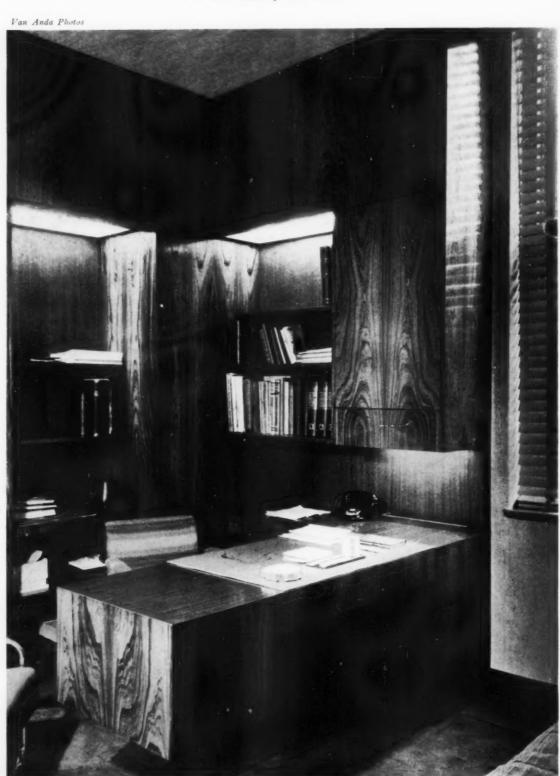
It is figured that large, airy rooms can be rented at about nine dollars per month with the usual apartment-house services, and that garage and such necessary additional facilities can be provided at very low rates.



THIS HOUSING PROJECT NEAR ALEXANDRIA, VIR-GINIA, IS PROPOSED BY ANDREW J. THOMAS. ARCHITECT, AS HAVING ADVANTAGES TO FEDERAL EMPLOYEES.

PRIVATE OFFICE OF GORDON REED, HANLEY COMPANY, NEW YORK CITY V. HAGOPIAN, ARCHITECT

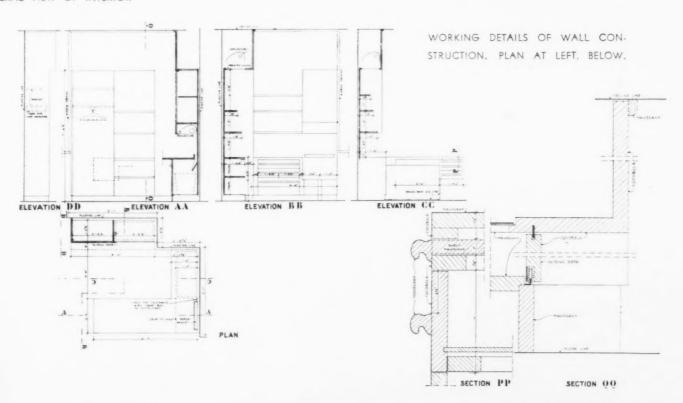
This private office is used for interviews and for directing the city office staff of a manufacturing company. The arrangement was determined by available daylighting and by factors of convenience in seating visitors and in location of library and files.



MODERNIZATION SPECIAL



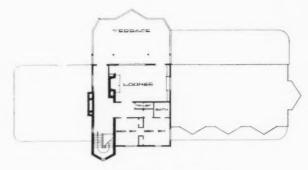
GENERAL VIEW OF INTERIOR



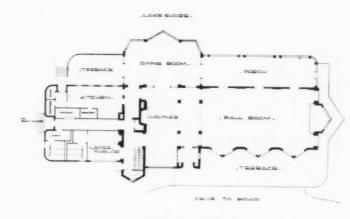


DINING ROOM AND TERRACE FROM LAKE SHORE

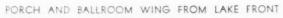
EL KARUBAH CLUB HOUSE, CROSS LAKE, LOUISIANA JONES, ROESSLE, OLSCHNER AND WIENER, ARCHITECTS



SECOND FLOOR PLAN



FIRST FLOOR PLAN







LUTZ FUNERAL HOME READING, PENNSYLVANIA

PLANNING THE FUNERAL HOME

BY ELMER H. ADAMS OF WEIDNER & ADAMS, ARCHITECTS

The average attendance at a funeral is too large for the ordinary living room and too small for a church. The dignity of the ritual is marred in the one case by the discomfort of overcrowding and in the other by the incongruity of a meager gathering in a great hall. A funeral home combines the devotional atmosphere of a small chapel with the conveniences of a private residence and, being admirably suited to a purpose not otherwise adequately served, is coming into general

The following check list is intended to cover the complex requirements of this specialized type of design.

GENERAL REQUIREMENTS:

A. Site:

1. In a quiet neighborhood providing parking facilities, and accessible to public transportation systems.

B. Style:

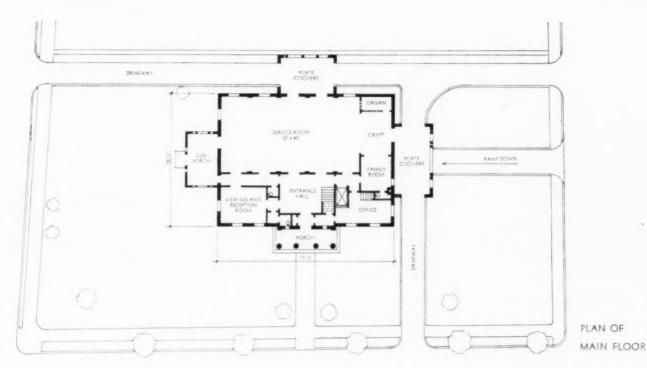
- 1. Domestic character to be followed throughout.
- 2. Dependent upon usage and custom, a combination domestic building with ecclesiastical chapel and details may be desired.
- C. Plan: Generally one of two types may be followed:
 - 1. First floor used primarily for conducting services. Second floor used for display and working purposes.
 - 2. First floor containing service room and working areas. Second floor containing casket area and apartments or dormitories for attendants and visitors.

D. General:

- 1. Keep from public sight, as much as possible, bringing in and handling of bodies and supplies.
- 2. Provide easy approaches to sheltered entrances and
- 3. Provide sufficient convenience receptacles throughout building for floor and table lamps, etc.

SPECIFIC REQUIREMENTS:

- A. First floor: (Rooms arranged according to type I plan.)
 - 1. Service Room: 32' x 60' to seat comfortably 350 people. Decorated and furnished informally as a very large living room. Folding or rigid chairs add to normal seating capacity. Acoustical treatment of walls and ceilings and quiet floor coverings desired throughout. Access to a porte-cochère over driveway for public use. Lectern and chairs for ministers in front of room. Lighting, soft and diffused.
 - (a) Patrons and custom may demand instead a "chapel" with stained glass windows, high ceilings, pews, etc., to convey a church atmosphere.
 - 2. Alcove or Apse: 12' x 18' opening full length on main axis of service room and possible to be curtained off when desirable. Natural daylight unnecessarv: use soft, diffused, indirect lighting. Concealed spotlights for lighting floral pieces. Direct exit to porte-cochère for loading casket and flowers in hearse. Adjacent closet space, 2' x 7', for wire flower racks, prayer rail and catafalque.
 - 3. Family Room: 12' x 20'. A small living room in size and furnishings, adjacent to service room and alcove so that the family may see the casket and ministers in privacy. Private entrance and exit to this room from interior and exterior. Exit to a porte-cochère for loading cars. Adjoining toilet rooms and coat
 - 4. Reception Room: 16' x 20'. Ordinarily a reception room and lounge. May be used also for viewings.
 - 5. General Office: 12' x 18'. Adjacent to entrance. providing accessibility and supervision. Cashier or bookkeeper's desk and filing cabinets; coat closet



LUTZ FUNERAL HOME, READING, PENNSYLVANIA ELMER H. ADAMS, ARCHITECT, NOW OF THE FIRM OF WEIDNER & ADAMS. ARCHITECTS

SPECIFIC REQUIREMENTS: (Continued)

6. Organ Chamber: 10' x 12' x 13' height, minimum size for average mortuary organ. Adjacent to alcove and service room. Hard, smooth plaster finish; no exterior openings necessary.

7. Choir Alcove: 8' x 10'. Adjacent to front of service room. Separate entrance for organist and choir. Organ console 4'-6" x 5'-3" may be placed directly in service room, dependent upon usage, thus eliminating the need of an alcove. A self-player attachment 2' x 4'-6" should be placed in a separate room or in the office.

8. Vestry Room: 8' x 10'. For visiting ministers to don vestments. Used for last minute conferences with family. May be in connection with office.

9. Retiring Space for Pallbearers: Desirable, but not necessary. To provide an assembling space for pallbearers, in corridor near casket alcove.

10. Flower Room: 8' x 10'. Containing 24-in. work bench and a refrigerator for flower storage. Adjacent to casket alcove.

11. Control Room: 5'x 9' space may be provided for housing electric sound transmitting and reproduction of public address apparatus, and panels for lighting first floor and floodlights. Loud-speakers may be concealed at strategic points throughout the building to reproduce music or services.

12. Toilet and Rest Rooms: One for each sex. Dressing room for ladies. Easily accessible to public. Use sound deadening materials in walls and silent flow fixtures. Place a drinking fountain in public corri-

13. Elevator: 4' x 8'-6" car size practical. Combination passenger and freight. Install near alcove and main entrance.

14. Entrance Halls and Corridors: So arranged that

they may be utilized for accommodating large crowds. Generous openings should be provided between the service room and these areas to permit such use.

B. Second floor:

1. Display Room: Similar in area to service room. A room 32' x 56' comfortably displays 35 caskets without placing one above the other on racks. Average casket, 2'-4" x 6'-10", weighs 200 lb. This area may be divided up into smaller rooms, each 12' x 15', for displaying the caskets according to price range. Separate room for children's caskets.

2. Dry Goods Display Room: 9' x 11'. For display of gowns, suits, etc. Sliding glass front display cases

recommended. Adjacent to casket display room.

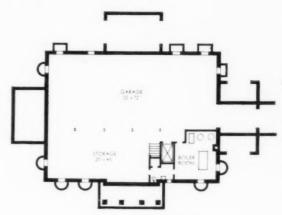
3. Preparation Room: 14' x 20'. Should be finished and lighted as an operating room with tile floors and wainscot. This size room accommodates two operating tables size 2'-4" x 6'-6" and weighing about 680 lb. each. At the foot or drainage end of each table, place a 20" x 20" x 20" slop sink 7' on centers with spray attachment, spigot, and flush valve; this should be toward the daylight, north exposure preferable. Instrument cabinet 12" x 28" x 5' may be recessed into wall. Positive exhaust ventilation to outside necessary. Floor drain. 5-in. shelf, 4'-6" above floor along wall between slop sinks desirable to hold supplies, cosmetics, etc., during embalming. Convenience outlets in wall at each table for electric hair dryers, etc. Adjacent closet space 15 square feet, with shelves on two sides for storage of supplies, cleaning equipment, etc. Scrub-up sink desir-



LEFT: DISPLAY, SLUMBER AND PREP-ARATION ROOMS ON SECOND FLOOR ARE ACCESSIBLE FROM CENTRAL STAIRWAY.

LUTZ FUNERAL HOME, READING, PENNSYLVANIA

ELMER H. ADAMS, ARCHITECT, NOW OF THE FIRM OF WEIDNER & ADAMS, ARCHITECTS



BASEMENT FLOOR PLAN

SECOND FLOOR PLAN

RIGHT:

THE BASEMENT PLAN IS GIVEN OVER TO GARAGE ACCOMMO DATION, STORAGE AND ME CHANICAL EQUIPMENT.

SPECIFIC REQUIREMENTS: (Continued)

- 4. Slumber or State Rooms: Furnished as private bedrooms where families may view the deceased in privacy. The rooms vary in size from 8' x 11' to 14' x 16'. The number of rooms provided depends upon individual practice-four is an average. Separate room furnished as child's bedroom. Each room opens privately from a corridor. Soft, diffused lighting. Keep well ventilated. Provide linen closet for storage of bed linens, etc.
- 5. Private Office: 12' x 18'. Comfortable furnished room for consultation purposes, where funeral arrangements may be made. Toilet room adjacent.
- 6. Elevator: Located to provide ease of circulation to display room, preparation room, and slumber rooms.

C. Basement floor:

- 1. Mechanical Equipment Area: Boiler and fuel storage. Air conditioning equipment which may include heating, humidifying, and cooling. Carefully guard against duct-work transmitting mechanical noises to upper floors. Domestic hot-water heater, 24-gallon capacity sufficient for home without apartments. Incinerator, 1-bushel capacity sufficient. Organ blower, 2'-6" x 6'-3", 1 hp. motor. Run a 3" and a 10" round galvanized air duct from blower to organ chamber. Meter room, 8' x 12'. Panel and meter board for power and light circuits along long wall. Switch box 2' x 3' x 5' high for intercommunicating house phone. Telephones in basement, offices, display
- room, preparation room, etc.

 2. Stock Room: 20' x 25'. Storage space for caskets in outside cases 2'-6" x 2'-0" x 7'-3", stood on end, and burial vaults. Space depends on number of cas-kets stocked. If funeral director covers and trims caskets, double this space to include a trimming room with cupboards along one wall for linings, hardware, etc.

- 3. Storage Room: 15' x 20'. For chairs, supplies, grave decorations and lowering devices. Adjacent to elevator. Folding chairs stored 6 to a bag. Ten bags on truck measure 1'-6" x 4'-6" x 6' high. Fifty Windsor armchairs, two high, occupy space 6' x 14'.

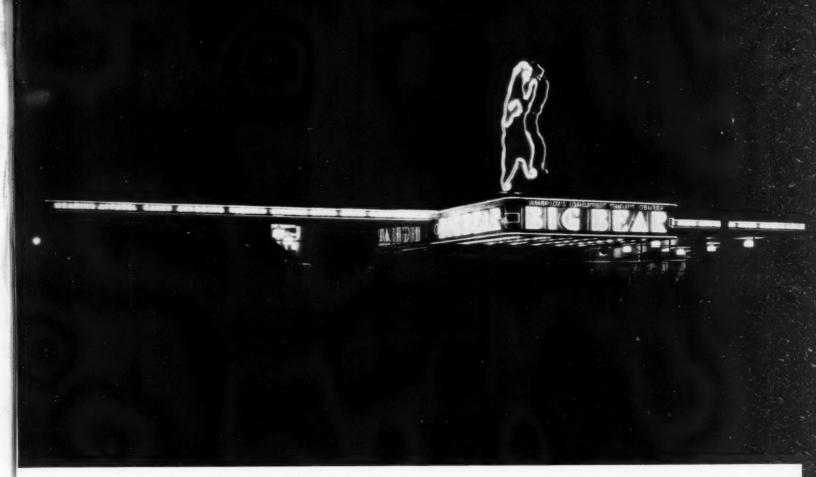
 4. Shower and toilet facilities and lockers for atten-
- 5. Garage: If possible, for storage, repairs and washing. Arrange so that caskets may be unloaded directly into elevator.
- 6. Auxiliary Requirements: Dependent upon the practice of the funeral director.

Crematory.

- 1. Crematory Unit: 6'-4" x 12'-7". Height above lounge floor level 6'-9". Workroom floor level in rear 2'-6" lower. Oil or gas firing preferable, two burners to one unit. Outside walls of salt glaze brick or tile. Flue under floor to 20" x 20" stack. Storage space for fuel.
- 2. Lounge: 12' x 15'. Charging door of cremating unit concealed behind door in paneling or screen along
- 3. Workroom: 5' x 9'. Work area at rear and side of unit for firing, removal of ashes, etc.

(b) Cryptorium.

18' x 24'. Contains vaults for temporary or permanent entombments, and niches for ashes in urns. Average number of vaults, four. Clear space required in each vault, 2'-8" x 7'-4" x 2'-2" high. Vault construction: slabs of marble, stone or slate fitted for metal fronts held in place by clasps, thumbscrews and lock. Niches, average size 12" x 12" x 15" high in tiers along wall, similarly constructed. Hinged doors of pierced metal and glass, locked with master



NIGHT VIEW, BIG BEAR SHOPPING CENTER, JERSEY CITY, N. J.

AUTOMOBILE SHOPPING CENTERS

B. SUMNER GRUZEN, ARCHITECT

The Big Bear Shopping Centers, one in Paterson, N. J., and the other in Jersey City, illustrated herewith, belong to a chain of department stores designed for automobilists. The chain is of recent origin and its first store in the East, at Elizabeth, N. J., was opened about a year and a half ago. The chain has made a rapid growth and is represented in many of the larger cities.

The Center draws its patronage principally from the motorized public. That, plus the large space required, determines its position on a main highway near the outskirts of the city or at any rate beyond the regulation shopping area. The Center provides free parking space for 500 to 1,000 cars.

As was natural in a new enterprise of this sort, the department store and the public markets were the two sources of experience on which to build. The Big Bear Shopping Centers illustrated here are the culmination of years of experience of one of the East's largest grocery wholesale and retail merchants. The grocery units of the Centers are unique and contain a strong merchandising appeal, although they are self-service and contain not one salesman. Around the grocery unit we build our Center. It is the largest household necessity. With modern methods of advertising, grocery brands have become passwords. The grocer's salesmanship efforts in regard to them are superfluous. It then becomes the duty of the grocery department supervisor and the architect to devise the best means of display, including in some cases silent salesmen, such as rotary pyramids, etc. David Louis Zwerling, the grocery department supervisor of Big Bear, placed at the disposal of the architect years of experience with the American Grocery Company, the parent of Big Bear.

The next problem was to select and correlate the other departments in such a way as to justify the Big Bear slogan "Buy all under one roof." The architect's special concern is to maintain the personality of the store in its planning. He creates a background against which the merchant displays his goods and disposes of them. This personality must be an effect obtained upon entering and must be subtle enough to be displayed quickly by the merchant. The architect's duty is to keep all simple, uniform and effective without defeating the merchant's desire for the spectacular.



Davis Studios



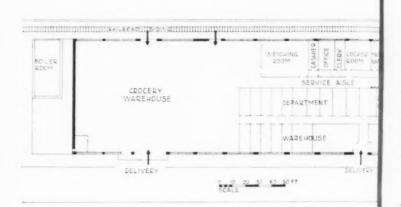
In the Paterson Center strong horizontal lines and forms were used in the fixtures, in an attempt to stabilize the various effects and jagged lines of the merchandise and with the further intent to concentrate all lines including aisles on the grocery department.

It is too early in the experience of this method of shopping to say how large the Center should be. One fact has been determined and that is that everything must be on one floor. That is yet to be proved incorrect. In Europe, while I was not surprised to find all markets and large municipal shopping centers arranged on one floor, I was impressed with the fact that department stores throughout almost all of Europe feel that visibility of the entire store from a single station is necessary. Even in the new Bijenkorf store at Rotterdam, by William Dudok, the European plan of balconies around a central well prevails.

With a Shopping Center which contains mostly foods with rather restricted dry goods and other soft line departments, it is felt that one floor with comfortable aisles and effective displays to stimulate impulse buying is desirable. The Jersey City Center has a shopping area of 45,000 sq. ft.; the Pater-

LEFT, WINE AND LIQUOR DEPARTMENT AT THE BIG BEAR SHOPPING CENTER, JERSEY CITY, N. J.

PLAN OF BIG BEAR SHOPPING



son Center, 30,000. In Elizabeth 29,000 ft. has proven very satisfactory.

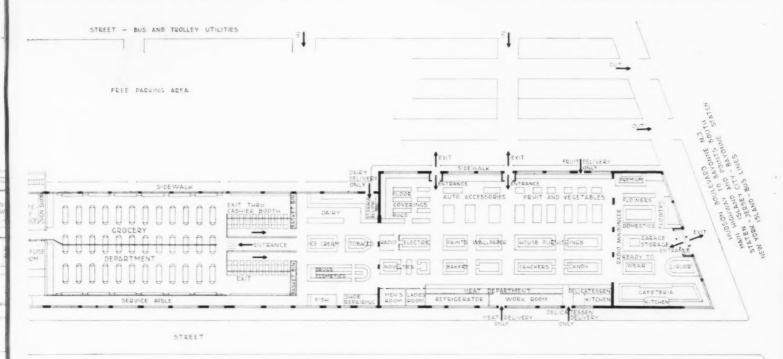
A mean area must be determined for each department because the system does not permit expansion or contraction of the departments with the season. This would eliminate many departments desirable in the set-up but which must be sacrificed to the success of the whole. To lose the personal touch altogether would not tend towards success.

Since a grocery store needs a few artificial means to attract its consumers a new method was tried in Jersey City and proved successful. Where in the other Centers the grocery department is placed in the center and the other departments about it. in the new Big Bear the grocery department is placed in the rear and all customers are forced to pass the other departments on their way to it. The grocery department method of pay control is another factor in this new arrangement. Two, three or more dollars in groceries make a rather large parcel so that it is desirable to have the consumer do her small purchasing before she reaches that department. We are dealing here with a non-delivery method of selling. All is cash and carry.

In the new Paterson Center theoretical practices were adopted.

After one passes from the dry lines in the front section into

1 G



the food section, one finds the butcher and the dairy in the main right aisle on the way to the grocery, and the fruit, vegetables, fish and delicatessen on the left on the way out. The accessory departments, such as bakery, crackers, candy, etc., are placed on the left and right, respectively, with the tobaccos, house furnishings, ice cream, etc., in the center aisle. Consumers do not buy quite as theoretically as all this, but with ample aisles and effective display we find good circulation around each department. A maximum height of 52 inches for interior departments permits ample visability in all directions.

The cafeteria functions profitably in almost any not too obscure location and might well be located to serve as a resting point in those Centers that exceed 20,000 square feet. A restaurant on a mezzanine overlooking the entire Center would be a silent salesman and reminder of great value. In all departments, except the grocery, a simple system of pay as served is adopted. In the grocery department the customer is given a basket on entering. He or she leisurely selects the articles desired from counters or wall shelves and on the way out passes through a checking counter at which is stationed a cashier and wrapper; as the cashier takes each item from the basket he punches an adding machine while the packer places

it in the bag. When all the items are recorded, the machine shows the total owed, and the package is also ready.

The storage section must be quite large. Generally speaking, an area equal to 50 per cent of the shopping area should be reserved for storage. This will depend somewhat upon the distance of the Center from the central warehouse. In designing the store counters it is desirable to have as great an understocking as is possible. The standard used here is 30" high and 30" wide. In the case of the grocery and produce departments it is almost impossible to service one for an entire day and servicing must go on all day. To work out carefully the relation of the warehouse to counter servicing is of paramount importance. In the case of the butcher, dairy, fish and delicatessen as large a refrigerator on the floor as possible is worked into the display with an abundance of refrigerator display cases. The distance from the cutting room to the refrigerator and display case must be as concentrated as possible. Many of the commodities must remain in the refrigerator until called for by the customer. Refrigeration in the warehouse is not of great importance except to the dairy department, which requires space for egg candling, etc. Ample space must be allotted for vegetable and fruit storage. The mechanical equipment of the Center, while intricate be-



INTERIORS OF BIG BEAR SHOPPING CENTER, JERSEY CITY, N. J



cause of the special needs of departments, is not unusual and does not require explanation here. With refrigeration and cutting rooms occupying the sides of the building, it is obvious that windows on the side lower than II feet would be of no value.

In preliminary studies it was thought to gain an abundance of light from the sides to illuminate the 100-foot wide building, but here the careful study of two of Europe's new stores proved of assistance—that of the new Bijenkorf store by Dudok in Rotterdam and the Shocken Store by Mendelsohn in Stuttgart. Mendelsohn kept his windows 6 to 7 feet from the floor to permit shelves, etc.; his windows start there and go to the ceiling. In Rotterdam the windows consumed almost all the wall space and the management of the store was forced to build shelves and displays against the windows, destroying the aesthetic values intended and creating an awkward appearance on the exterior.

If the building is to have a flat roof with columns, then windows should start I ft. from the floor and go to the ceiling. A 20 to 25-feet height may be regarded as ample, with clear spans if possible. Vaulted or trussed roofs are preferable. Un-

less air conditioning is contemplated, low ceiling heights should not be used. It is advisable to introduce air conditioning in any case, as the combination of food odors and crowds produces serious air conditions.

Skylights if used at all must be indirect, as the sun rays should not be permitted to concentrate on the merchandise. Only ventilated skylights should be used.

Heating the Center is probably the most difficult task of all. Fresh foods of a perishable nature suffer from heat. People will not on the other hand shop in a cold place, nor can salespeople in the soft lines be expected to dress as warmly as the men handling produce. To heat the building sufficiently without damaging perishable food is the problem and must be accomplished with radiators or blowers carefully directed so that those departments desiring low temperatures can have them yet giving the entire store a comfortable shopping temperature. Low temperature departments occupy the outer walls, so that heat concentrated at the center of the building diffuses sufficiently to the side to permit comfortable shopping. The warehouse requires only enough heat to prevent pipes, etc., from freezing.



FRUIT DEPARTMENT, BIG BEAR SHOPPING CENTER JERSEY CITY, N. J.



BY H. W. DESAIX, WATSON FLAGG ENGINEERING COMPANY, ELECTRICAL ENGINEERS FOR BIG BEAR, INC., PATERSON, N. J.

The lighting of shopping centers must be not only sufficient but of the right character. There is risk of neighborhood antagonism from attempts to attract the public by a cheap carnival appearance. Prospective customers are inclined to confidence in the management where this has been avoided.

DISPLAY SIGN

It is important that the automobile traveling public be able to see the location from the greatest distance. As large a sign as is practicable should be placed on the roof or at a proper height on the front of the building. The sign may show the emblem and name outlined with colored luminous tubes. The colors should be the same as those adopted for other display purposes of the emblem.

FLOODLIGHTING

In order to present a well-lighted outside appearance and to



DRY GOODS DEPARTMENT, BIG BEAR SHOPPING CENTER JERSEY CITY, N. J.

convey the impression of activity and patronage it is advisable to floodlight the exterior. This should not be accomplished, however, by promiscuously throwing light on the building. Most people possess some aesthetic sense, and react favorably to artistic treatment. It is essential that sufficient light be directed on the building and on the street but it is just as important that it be done in a dignified manner and not just "splashed on." This can be accomplished by installing along the curbs combination street lighting standards each equipped with a floodlight projector inclosed with the street lamp in one globe. The pole and combination luminaire can be of a design to suit the architectural surroundings. Reflectors should be adjustable and the canopy should be hinged for easy maintenance.

LIGHTING PARKING AREA

In the auto parking area, one aspect of the lighting problem is to provide illumination of an intensity to drive cars in and out safely and to discourage prowlers. Another phase is to design the system to illuminate vertical objects, instead of building up the intensity on a horizontal plane. In accomplish-



INTERIOR VIEW OF BIG BEAR SHOPPING CENTER, PATERSON, N. J.



ABOVE: BIG BEAR SHOPPING CENTER PATERSON, N. J. G. SUMNER GRUZEN, ARCHITECT

ing this, however, all objectionable glare must be eliminated. An inexpensive way is to provide the proper number and size of symmetric and asymmetric refractors supported on tubular steel poles, at not less than twenty-foot mounting height, nor spaced over six times the mounting. Calculations should be based on an average of ten times full moonlight on the horizontal or .25 foot-candles. The lamp position should be adjusted for 75-degree angle of maximum candle power.

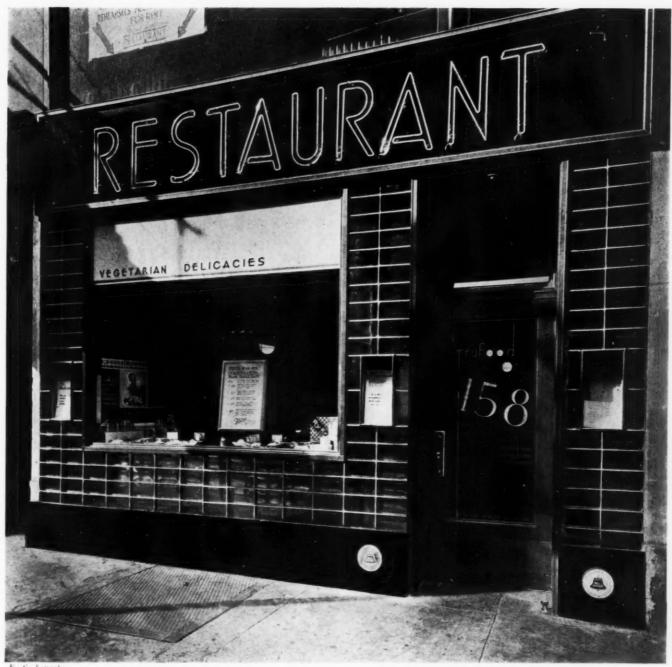
INTERIOR ILLUMINATION

Upon entering the sales area, the patron must be greeted with a high uniform intensity of illumination designed to average 20 foot-candles, be free from glare, and show up all merchandise on display. Where the building permits it the best arrangement is to mount luminaires not less than 25 feet above the floor, using prismatic glass reflectors, having an angle of maximum candle power of between 35 and 40 degrees. The reflectors should be mounted on an adjustable supporting device, in order to assure setting the lamp in the correct focal position. Spacing should not exceed one and one-half times mounting height. The use of this unit results in a glareless uniform intensity on the horizontal plane, but is particularly desirable for its value in maximum illumination of vertical surfaces, essential for display racks and package goods set up in stacks or pyramids.

When structural conditions do not permit high-boy units, an alternative arrangement that will produce as good results but requiring a greater number of units of smaller capacity to secure the same intensity can be had by using units of the same general construction and design but adapted for smallersized lamps.

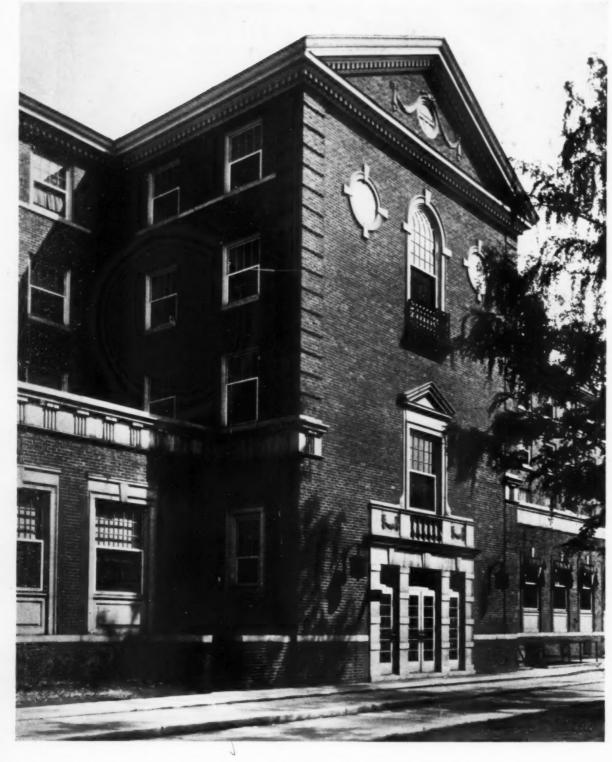
Well-designed high intensity systems of illumination attract patrons, assist in the display of goods, increase sales, promote cleanliness and create a feeling of security on the part of both public and management.

The general area lighting should be supplemented with some local lighting where necessary, especially for goods displayed in show cases, meats and dairy products in refrigerating display cases. Each department should be designated with a neat luminous tube sign of uniform design for all departments. Direction signs of a suitable type should be generously used, in order to assist the patron to the various conveniences and sections.



TRU-FOOD RESTAURANT, 158 WEST 44TH ST., NEW YORK CITY H. V. ST. GEORGE, ARCHITECT

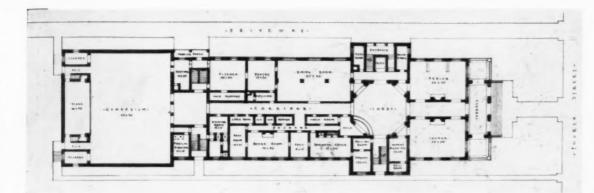
WALL FACED WITH STRUCTURAL GLASS



YOUNG WOMEN'S CHRISTIAN ASSOCIATION BUILDING WILLIAMSPORT, PENNSYLVANIA

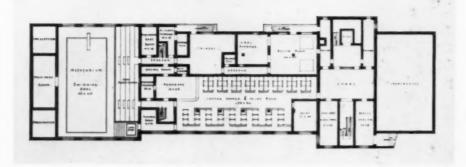
LAWRIE AND GREEN, ARCHITECTS



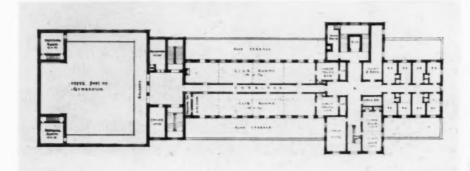


FIRST FLOOR

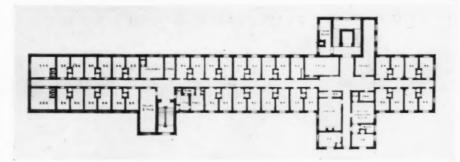
GROUND OR BASEMENT FLOOR



SECOND FLOOR



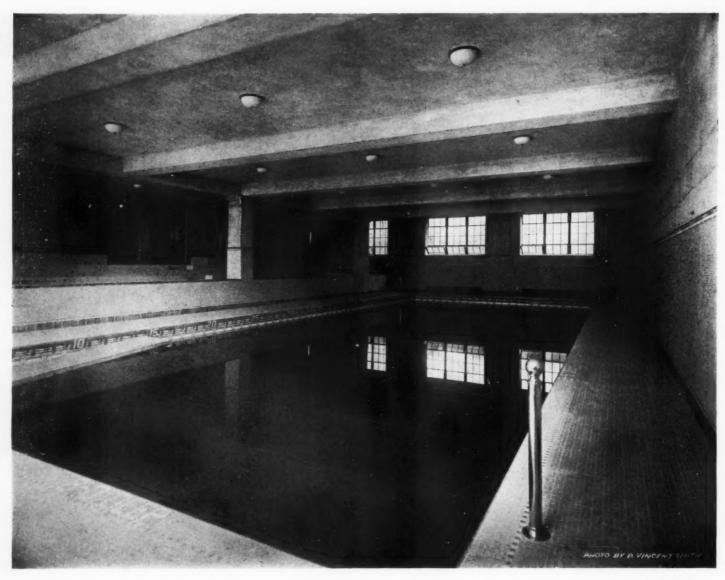
TYPICAL DORMITORY FLOOR



Erected on a level, narrow inside site 100' x 500' on one of the principal residential streets of the city. The problem of obtaining easy access to the various comparatively unrelated units on the narrow inside site, was one of the chief problems of plan.

In addition to social and recreational spaces, there are accommodations for 105 residents mostly in single bedrooms.

The building contains 1,100,000 cubic feet and was erected at a total cost, including architect's fees, of \$401,258.38. The walls of the building are of colonial red brick with limestone trim. A black slate roof with wood cornice was used.



SWIMMING POOL

YOUNG WOMEN'S CHRISTIAN ASSOCIATION BUILDING WILLIAMSPORT, PENNSYLVANIA LAWRIE AND GREEN, ARCHITECTS

BEDROOM

SWIMMING POOL-25' x 60' IN SIZE. WHITE CERAMIC TILE IN POOL WITH BLUE FAIENCE FLOOR AND WAINSCOT. WALLS AND CEILING IN A VERY LIGHT ORANGE TONE.



SINGLE BEDROOM - FLOORS OF DEEP GRAY CONCRETE. CEILING OF CONCRETE WITH BOARD FORM MARKS VISIBLE. WALLS AND CEILING PAINTED IN PASTEL SHADES.



DINING ROOM

LOUNGE



CHAPEL

DINING ROOM-LIGHT BROWN RUBBER TILE FLOORS. GREEN PAINTED WOODWORK. LIGHT GREEN WALLS AND CEILING. ORANGE CRE-TONNE DRAPERIES.

LOUNGE-WOODWORK PAINTED WARM GREY WITH BLUE AND GREY PAPER ON WALLS. FLOORS OF WOOD WITH RUST COLOR.

CHAPEL - CARPET FLOORS. CREAM COLOR WOODWORK AND WALLS.



HEADQUARTERS HUT FOR ADMIRAL BYRD IN THE ANTARCTIC

VICTOR H. CZEGKA, DESIGNER



VICTOR H. CZEGKA

Building a house in Boston for use 12,000 miles away in the coldest climate known to man was the problem set to Ivor Tinglof, master carpenter, in providing Admiral Richard E. Byrd with suitable shelter while making scientific observations during the long Antarctic winter. The house is now occupied by Admiral Byrd. (A reproduction of the dwelling is also on exhibition at A Century of Progress Exposition at Chicago.) Instructions to the designer, Victor H. Czegka, supply officer of the Byrd Expedition, called for a house so light it could be carried by airplane, so simple it could be put up at great speed by men working in subzero weather, and finally and most important, so constructed that it would keep its occupant livably warm with a minimum of fuel consumption. Czegka's design fulfills all these specifications. Admiral Byrd uses only four quarts of fuel a day for cooking, light and heating, yet this is enough to keep him warm while the outside temperature ranges from 65 to 100 degrees below zero.

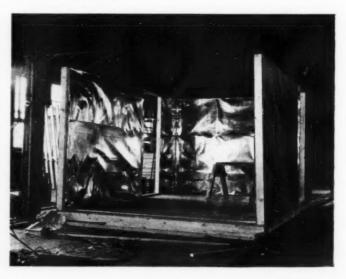
The hut is 9 feet wide, 13 feet 1 inch long, and 7 feet 1 inch high, measured on the inside of the room. In addition there is a porch 4 feet wide running the length of the hut; its roof is supported on three sides by boxes of supplies piled up to the level of the flat roof deck. In this porch roof is a trap door through which Admiral Byrd can make his way to the surface of the snow should any of his tunnels become choked with ice and snow. A door opens from the house to the porch. There are two wire glass windows in the roof of the house itself. One stove pipe for the Primus stove and a heater, a 5-inch hole in the floor, connected to a vent pipe which extends above the snow level, and two 4-inch vents in the ceiling constitute the only other openings.

The inner surface of each panel is covered with (1) a fireproof canvas. This is applied directly to (2) the kraft-paper-faced thin wood panel lumber 1/8 inch thick. Progressing toward the outside of the structure the next layer (3) is Type B Metallation, which is made of heavy kraft paper faced on both sides with polished aluminum foil .0025 in. thick. The Metallation is not glued to the wood panel material but there is a slight air space formed by the natural bulging of the metal insulation. The next layer (4) is a sheet of reinforced waterproof paper somewhat wavy in character which likewise does not make a uniform contact with the Metallation. Then come (5) two layers of kapok blanket each about 1/2 inch thick, and with no space between the layers except for an intervening sheet of waterproof paper.

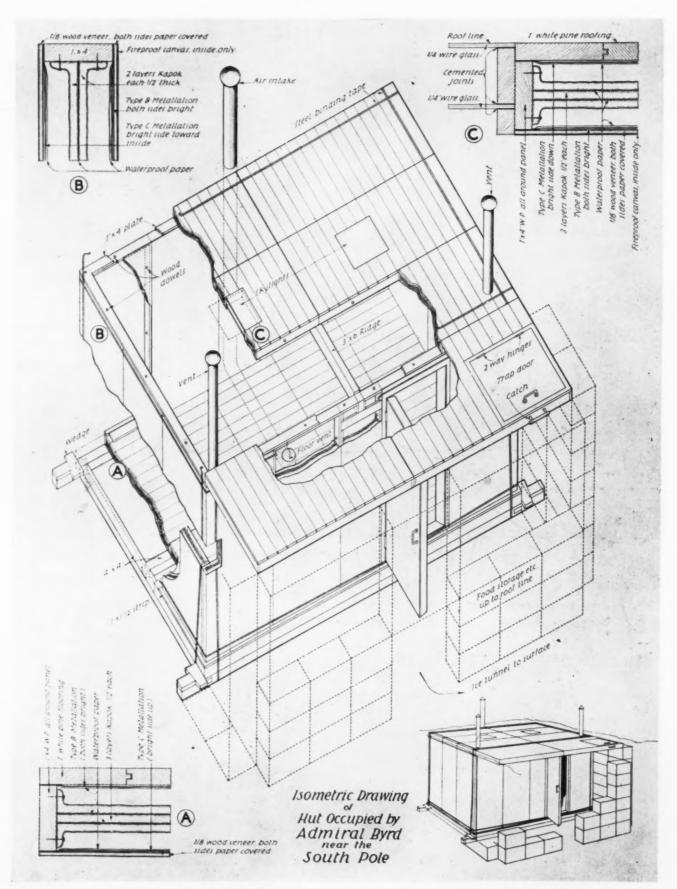


THE EXACT REPLICA OF THE HUT, WHICH IS PART OF BYRD ANTARCTIC EXHIBITION, AT THE CENTURY OF PROGRESS IN CHICAGO

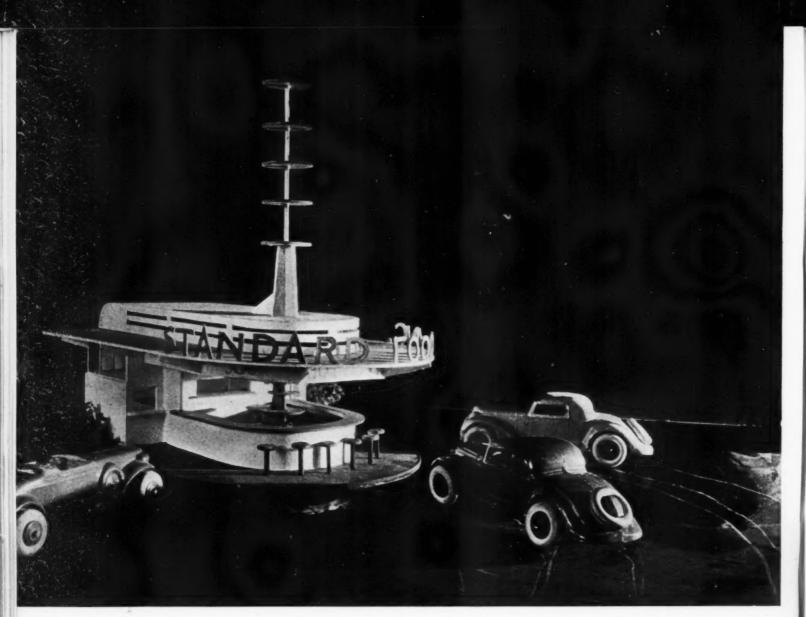
THREE WALLS OF THE HUT SHOWING THE ALUMINUM FOIL THERMAL INSULATION



THE ARCHITECTURAL RECORD

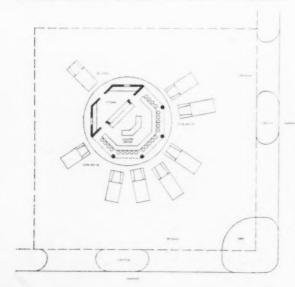


DETAILS SHOWING MATERIALS AND CONSTRUCTION OF THE ANTARCTIC HUT



MODEL FOR ROADSIDE EATING STAND DESIGNED BY STANLEY NELSON UNDER THE DIRECTION OF KEM WEBER, ART CENTER SCHOOL, LOS ANGELES.

A ROADSIDE DINER IN LOS ANGELES







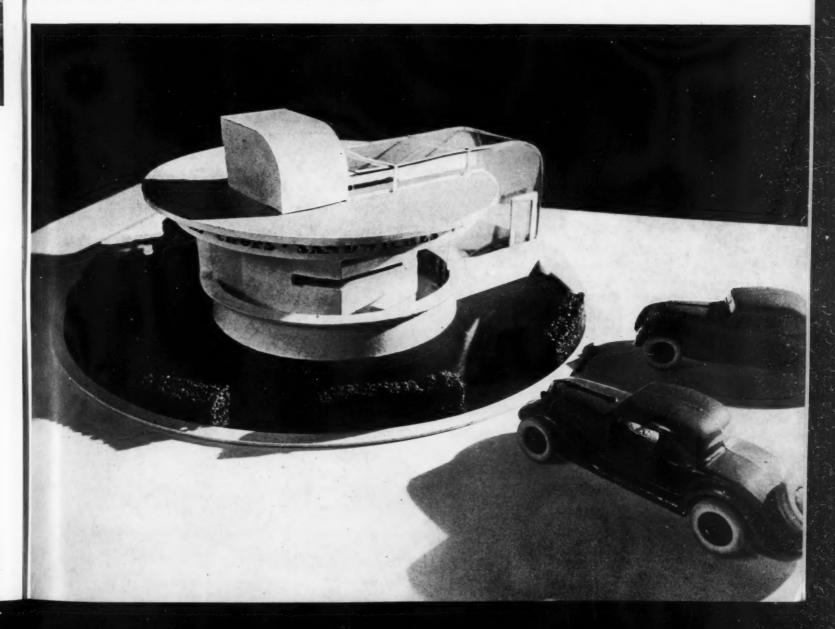
Albert Fre

THE

ROADSIDE DINERS FOR MOTORISTS

The roadside restaurant is designed to accommodate motorists who drive to the "stand." Food is brought to the car on a tray, mounted on a rubber-tipped bracket to fit on the side of the car. There is ample counter service for pedestrians.

MODEL FOR ROADSIDE EATING STAND. THIS DESIGN IS PLANNED TO ACCOMMODATE THE MAXIMUM NUMBER OF PARKED AUTOMOBILES. THE INCLOSED STRUCTURE IS INTENDED FOR COUNTER SERVICE DURING INCLEMENT WEATHER. DESIGNED BY CHARLES PORTER UNDER THE DIRECTION OF KEM WEBER, ART CENTER SCHOOL, LOS ANGELES.



This automatic vendor delivers packaged ice by insertion of a coin in a slot. These devices produce ice on the site and automatically wrap the ice ready for delivery. They are located in the districts near homes. The advantage of such a method for dispensing ice consists of: 24-hour service, low price resulting from self-service, sanitary control of delivered ice.



THE ARCHITECTURAL RECORD

THE FEDERATION OF ARCHITECTS, ENGINEERS, CHEMISTS AND TECHNICIANS

A REPORT

BY SIMON BREINES

CHAIRMAN OF THE PROJECTS COMMITTEE, ARCHITECTS SECTION

THE F. A. E. C. & T. IS A NATIONAL ECO-NOMIC ORGANIZATION OF TECHNICAL EM-PLOYEES. ITS MEMBERSHIP TOTALS ALMOST 10 000.

uring the past few months the Federation of Architects, Engineers, Chemists and Technicians has set up a three-point program:

- Immediate work or cash relief for technical employees.
- 2. Adequate, comprehensive public works.
- 3. Unemployment insurance.

Reports from various chapters give conclusive evidence of our success in attaining the first point. With the termination of the CWA on April I, all emergency jobs were transferred to local administrations on a relief basis. As a result thousands were laid off, wages cut and many projects discontinued. However, the Federation, through organized protest, was able to win a great percentage of reinstatements and to halt numerous lay-offs. The procedure of having grievance committees instead of individuals present all complaints directly to the Administration at stated intervals has been established and the right to organize on the projects assured.

On the second point the Federation states that the only reasonable solution to the problem of employment for technicians is a nation-wide program of public works. Plans for reviving employment in the construction industry have not accomplished much to date. A recent survey by Columbia University estimated that among architects 95% are without work in their field; among engineers 85%, and among chemists 65%. In the building trades over half the workers are unemployed.

In 1932 less than 50,000 residential units were constructed and yet an NRA survey published at the end

of that year indicated that the country needs 800,000 new units a year. The building industry, for a number of reasons, has been unable to satisfy this need.

In answer to this situation Administrator Ickes stated, at the inauguration of the PWEHC last October, that:

"Our experience of the last few months indicates clearly that we may not depend upon private enterprises to initiate comprehensive low-cost housing and slum-clearing projects."

Nevertheless, the failure of the PWEHC to do much to improve the housing situation is due in large part to the requirement of self-liquidation established for its projects: that no houses were to be built unless they could pay for themselves. This factor of self-liquidation has meant that rentals would be beyond the incomes of precisely that section of the population which the administration stated it wished to aid.

Increasing recognition of this difficulty is evident in the announcement on June 13 of a National Housing Policy by the American Institute of Architects, which urges:

"It is time that we abandon the idea that housing is a business and accept it frankly as a public utility as we have accepted education, hospitalization, etc. Housing for the lower-income brackets cannot be obtained under private initiative, even with favorable financing."

The Federation had come to this conclusion some time ago. Its provisional formulation of a Statement of Principles on a Program of Public Works, including housing, contains the following:

"The Federation of Architects, Engineers, Chemists

and Technicians, a national organization of professional workers, calls upon the government of the United States for the immediate inauguration of a socially useful public works program of research and construction under the following conditions:

- that the program shall be long-termed, nationwide, comprehensive and organized on a central plan;
- 2) that the program shall be entirely public, not only as to finances, but also as to the land involved in the projects (except in the case of public works farm housing), and as to the construction and administration;
- that all administrations connected with the program, such as construction, operation and use, shall include adequate representation of national and local organizations, professional and otherwise, to safeguard their wages, tenure and other rights;
- 4) that the charges to the public for the use of any of the social utilities created under this program shall be based on ability to pay rather than on the cost of construction, operation and use;
- 5) that there shall be no charge to unemployed workers for such use during the period of unemployment, unless they are receiving unemployment compensation; and
- 6) that the costs of this program shall be made a general charge upon industry and government, without contributions by workers or farmers directly or indirectly, and without increased taxes on small home-owners; and that taxation of incomes of corporations and higher incomes of individuals, inheritance and gifts, suggest available sources."

With this Statement of Principles as a basis and guide, the various Federation chapters have begun to develop local programs of public workers calling for comprehensive and integrated research, planning and construction. Cooperation with other interested organizations on this program is hoped for.

The Federation's position in regard to rentals being proportionate to income is not based on any abstract theories of altruism. On the contrary, we are quite selfish. We have observed that as soon as wages fall, the inhabitants of the poorer dwellings begin to double up for economy. On a large scale, as at the present moment, this tendency creates a market surplus, which curtails the production of new housing. This in turn throws architects and other technicians out of work, reduces the demand for building materials and labor, and depresses industry in general. In other words, the simple and direct availability to the general public of such utilities as housing is a necessary and practical factor in the solution of the housing question in gen-

eral and the problems of the technician in particular.

This logically brings us to the last part of the three-point program: unemployment insurance.

The Federation believes that an adequate system of unemployment insurance would be the best guarantee against a market surplus of housing or any other social utility, and, to put it another way, would be the best guarantee of continuous employment. Today this subject is receiving a great deal of attention, especially in Washington. A number of unemployment insurance measures were before the last Congress and the Federation, after investigation, decided to endorse the Workers' Bill, HR 7598. The reasons for this choice are that it was the only bill that included all occupations: "industrial, agricultural, domestic and professional workers"; and that it provided for benefits to start immediately after the law is passed, and extend for the full time of unemployment.

A word about the code in conclusion. The Federation is pleased to report that it has achieved the inclusion of a provision on all PWA projects establishing a minimum rate for architects, engineers and other professionals. This rate calls for: \$36 for the northern zone, \$33 for the central zone, \$30 for the southern zone. Although the Federation does not feel that these rates are adequate compensation for technical men, nevertheless, a minimum security in the labor provisions of the PWA program which did not exist before is provided.

On May 27 a Committee was sent to Washington by the Federation to militate for the inclusion of a wage provision for technical men in the Construction Industry Code which had not been provided in the Architects and Engineers Supplements submitted by the A.I.A. and the A.S.C.E. Because of opposition the Committee finally proposed to the Labor Adviser an alternative suggestion to our original Code demands. This alternative calls for a provision to be written into the Architects and Engineers Supplements providing wage rates and conditions of labor similar to those now obtaining on PWA projects. This provision removes the objection of the A.I.A. and the A.S.C.E.to wage fixing which does not provide for regional differentials.

Major Campbell, Deputy Administrator of the Construction Industry, has been agreeable to our proposal. He wrote a letter to the Adviser of the Construction Code Committee asking for an opinion on the proposal, and suggested that we be invited to subsequent meetings of the Code Committee and the Administration. All draftsmen are urged to address themselves to Major Campbell supporting our plan for minimum wage provisions. The Federation has in addition received affidavits from about 800 technical professionals, who are not Federation members, empowering us to act in their behalf on this matter.

TECHNICAL NEWS RESEARCH

BY HENRY L. LOGAN

ELECTRICITY IN THE HOME-Part 2

ELECTRICITY IN THE HOME

BY HENRY L. LOGAN

PART TWO-LIGHTING

CONSULTING ELECTRICAL ENGINEER

The fundamental purpose of artificial lighting in the home is to make it as PURPOSE safe, convenient and comfortable by night as by day. The amount of light this requires is shown in the following table:

			TENSITY IN		,	INTENSITY IN FOOT-CANDLES'
OUTSIDE				OUTSIDE		
Paths in grounds			0.5	Main entrance		. 10.0
Approach to hous	е		0.5	Trades entrance		. 5.0
Driveway INSIDE			0.5	Porches		. 10.0
Vestibule			20.0	Bedroom floor corridor .		. 5.0
Entrance foyer .			20.0	Bedrooms		. 5.0
Stair hall			10.0	Bathrooms		. 20.0
Living room .			20.0	Library		
Sun room			20.0	Nursery		
Dining room .			20.0	Laundry		
Kitchen			40.0	Game room		
Butler's pantry .			40.0	Storage		. 5.0
Breakfast room .			20.0	Boiler room		
0			5.0	Garage		. 40.0

* The foot-candle is the standard unit for measuring illumination, just as the degree Fahrenheit is the standard unit of measure-ment of temperature. It is the degree of illumination on a surface one foot dis-tant from a standard candle.

The wattage per square foot of floor area needed to secure the intensities laid WATTAGE down in this table will vary with the type of fittings adopted, and the finish of the interiors.† This variation is given in the accompanying table.

	WATTS PER SQUARE FOOT OF LIGHTED AREA												
	Outsid Lightin		Inside Lighting										
Intensity in Foot- candles		Re- frac- tors	Period Fixtures	0	Direct Ligh	Semi-Indirect Lighting		Indirect Lighting					
	Orna- mental Lanterns			Functional Fixtures	Built-in Equipment		- To	ant			-		
					Diffus- ing Glass	Lenses	Functional Fixtures	Built-in Equipment	Coves	Wall	Functional Fixtures		
0.5	0.3- 0.5	0.1											
5.0	3.0- 5.0	1.0	3.0 5.0	1.0	1.5- 3	1	1.5	2-?	5	3.0	2.0		
10.0	6.0-10.0	2.0	6.0-10.0**	2.0	3.0- 6	2	3.0	4-?	10	6.0	4.0		
15.0				3.0	4.5- 9	3	4.5	6-?	15	8.0	5.0		
20.0				4.0	6.0-12	4	6.0	8-?	20	10.5	7.0		
25.0				5.0	7.5-15	5	7.5	10-?	25	13.0	8.5		
30.0				6.0	9.0-18	6	8.5	12-?	30	16.0	10.0		
35.0				7.0	10.5-21	7	9.5	14-?	35	18.5	12.0		
40.0				8.0	12-24	8	10.5	16-?	40	21.0	14.0		

† These figures are based on light wall and ceiling fin-ishes, and the use of the more efficient, higher watt-age lamps in all cases when possible.
** Period fixtures are im-

practical where satisfactory lighting intensities are desired because they cannot be made to accommodate sufficient wattage and at the same time retain their dis-tinctive character.





WIRING PLANS FOR TYPICAL HOUSE. SUG-GESTED LOCATION OF LIGHTING OUTLETS FOR ADEQUATE ILLUMINATION.

CEILING OUTLET

FLUSH LUM. WALL PLATE OR CONCEALED LIGHT

FLUSH CEILING UNIT

FLUSH INDIRECT WALL UNIT

FLUSH DUAL PURPOSE UNIT

BH OUTSIDE WALL UNIT

TWIN CONVENIENCE OUTLET

LUMINOUS HOUSE NUMBER

FUNCTIONAL SEMI-IND. UNIT

SINGLE POLE SWITCH

Artificial illuminants in the past provided light by burning. They needed ventilation to insure a steady supply of oxygen to support combustion and to carry away the by-products, as well as accessory means to protect surroundings from fire hazards, fumes and smoke.

This led to the development of fixtures hanging freely in space or safely bracketed out from the walls. These fixtures, through all their multitudinous forms, have been variations controlled by the defects and limitations of burning illuminants.

Electricity has none of these limitations. It does not need oxygen or ventilation; neither does it produce fumes or smoke. Electric lighting equipment can safely be built into walls and ceilings, as an integral element of the construction, without fire hazard.

The following discussion is based upon the application of the "built-in" principle. The "typical" plans selected to illustrate the discussion show a combination of rooms customary in a six-room house. Additional rooms that occur less frequently in six-room arrangements, or occur often in slightly larger houses, are included for the sake of completeness. However, the text has been made as widely applicable as possible and is not based on the plans. They serve only to show how the textual comments may be applied in an individual example. Space is not sufficient to permit explanation of the electrical arrangement for each room shown on the plans, but reference to the text together with a study of the peculiarities of form, size and location of the door and window openings of each space will lead to an understanding of those arrangements that may not seem clear from casual inspection.

Taking the typical areas and locations in and around the home, one by one, the following comments apply:

It is wise to light steps in the entrance path. This can be done with weatherproof step lights built into the sides of the steps, or into garden ornaments placed nearby; also by the more conventional lantern mounted on a post



A BOWL REFLECTOR TO PRO-JECT FROM CEILING OR RECESSED IN CEILING.

standard or bracket, or by means of an inclosing refractor similarly mounted. The entrance should be brightly lighted in order to facilitate safe movement, to protect against unwelcome intruders and to invite friends. The house number may be illuminated directly by the same equipment that lights the entrance, or a self-luminous number on a translucent panel (with the lamp inside) may be used; or the figures can be set out a little and appear in silhouette against a background illuminated by lamps placed behind the letters.

The equipment for lighting the entrance, and for illuminating the house number, should be rugged, durable and weatherproof. It should be controlled by switches inside the door or in the hall.

Also best when brightly lighted. The guests are aided in the removal and disposal of their wraps, movement is expedited and the friendly atmosphere of the entrance is continued. This location offers an excellent opportunity for built-in lighting. Separate illumination should be provided for the mirror. Wall brackets or a console table light are usually provided but neither is as satisfactory as luminous panels built into the walls on each side of the mirror, of large area and low surface brightness; or as lens equipment in the ceiling over the mirror directing light onto the observer (not onto the mirror). The switches should be conveniently located, possibly with those controlling the entrance and approach lights.

The guest closet can be provided with a 10-watt intermediate base, Mazda lamp in a ceiling fitting, operated by a door switch or a pull chain.

This space needs only about half the intensity of the vestibule, except in the absence of a separate vestibule (when suggestions in the preceding paragraph apply). Illumination is best provided from either built-in wall or ceiling equipment. Where the stair well goes through two floors it can be lighted from built-in equipment in the ceiling of the bedroom floor and in the soffit of the upper landing.

This room serves several purposes in the home and so must contain various forms of lighting. A natural objective of artificial light is to provide the benefits of sunlight. Members of the household spend most time in the living room, so this is the logical place for artificial sunlight equipment providing dual-purpose lighting, except where an all-year sunroom is a feature of the plan.

The equipment for dual-purpose lighting can be installed flush in the ceiling to provide general illumination. When single-purpose lighting is used the equipment may be installed in either walls or ceiling.

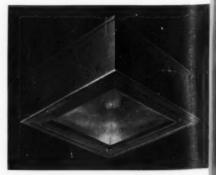
Ample provision should be made for portable attachments, with one convenience outlet for every five feet of wall space. If a portable is provided for each chair the needs of one person can be met without illuminating the entire room. Provision may also be made for the use of luminous ornaments.

Indirect portable floor lamps will be found useful for bridge parties, when the dual-purpose lighting is not desired.

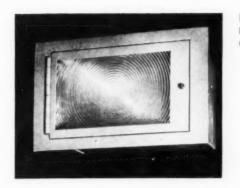


STAIR HALL

LIVING ROOM



RECESSED CEILING LIGHT FOR BATHROOM AND KITCHEN.



FLUSH LIGHTING UNIT RECESSED IN EAVES TO SERVE AS BURGLAR ALARM.

RIGHT INTERIOR WITH INDIRECT LIGHTING AND CONVENIENT LO CATION FOR PORTABLE LAMPS.



Three-way switches should be placed at both entrance and exit to control the general illumination. A mercury switch should be installed at the head of the stairs on the bedroom floor to permit turning on the living room lights from that point before descending, or turning them off after ascending, in those cases where the stairs rise from the living room.

SUNROOM

The sunroom should always be provided with dual-purpose lighting equipment, preferably set flush in the ceiling and controlled from a switch near the entrance. Where there is a separate exit from this room, such as into the garden, a three-way switch should be located at both entrance and exit.

DINING ROOM

The table is the natural center of activity. When lighted by a suspended fixture the result is apt to be glare if too high or interference with vision across the table if too low. With tables of adjustable size there is no "right" height, all locations for a hanging fixture being unsatisfactory. The best solution is equipment built in the ceiling over the table, with perhaps some indirect or semi-direct illumination from wall pockets, flush wall panels or coves. China and glass display closets and niches should have self-contained lighting equipment. Switches should be located near the entrance, with three-way type for room lights where there is both entrance and exit.

BREAKFAST ROOM

The problem and solution is the same as for the dining room, but on a smaller scale.

BUTLER'S PANTRY Built-in ceiling equipment should be provided over the sink and parallel to the closets, with the light directed toward drawers and shelf space.

KITCHEN

Same as for Butler's Pantry. In addition, a dual-purpose lighting unit, set flush in the middle of the ceiling, will be appreciated by anyone spending much time in the kitchen.

OUTSIDE SERVICE

ENTRANCE

A double-quadrant refractor panel should be built in over the door, or a simi-

UPSTAIRS CORRIDOR

lar device provided, with switch inside the kitchen door, to light the approach. Built-in wall lights of the semi-indirect type are most satisfactory for this location, with three-way switches in the hall downstairs and at the end of the corridor (for the latter, mercury type).

BEDROOMS

The most acceptable arrangement is to place a flush light in the wall, near the ceiling, over and behind the bed, to flood the ceiling. This places the source of light behind the person in the bed, at the same time insuring the brightest



AN INDIRECT LIGHTING FIXTURE DESIGNED BY RUHLMAN OF PARIS.

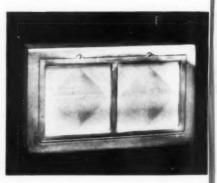
illumination over the head of the bed. Another method is to hang a semiindirect or indirect luminaire from the center of the ceiling and use a 36-inch 100-watt tubular lamp in a metal trough on the wall over each bed for bed lighting.

The night lights should be flush in the wall, under the head of each bed. The dressing table should be illuminated, separately, either by one of the methods suggested for the vestibule mirror, or (preferably) by lights on the backs of the mirrors, brightly lighting the wall around the dressing table, and in turn softly but clearly illuminating the person using the mirror.

Duplex convenience outlets should be placed about 5 feet apart in the walls. The dressing table lights should be controlled locally. Switches for the central ceiling light or the over-the-bed wall lights should be three-way, located at the entrance and at the bed. Switches for the night lights should be of the flexible extension type so they may be placed under the sleeper's pillow.

Indirect illumination from luminous wall plates, wall pockets, luminous indirect ceiling fixture (if out of reach of children), or direct illumination from large luminous ceiling panels are suggested. The baby's crib, if placed in this room, can be protected by a photo-electric alarm arranged so as to ring a bell if any one tries to remove the child or if the child tries to get out of the crib. The windows and doorway of the nursery may also be so protected. A night light should be placed in the wall under the crib. Switches should be of the silent mercury type located in the corridor, outside the nursery door. Convenience outlets should be located as frequently as possible and be protected by lock covers that will defy the children's fingers. All built-in artificial lighting equipment should be protected by shatterproof glass.

The bookshelves can be lighted by directional flush ceiling units. Paintings can be emphasized in the same manner. Reading light is best secured from a



TYPICAL FLUSH INDIRECT WALL LIGHTS FOR USE IN DINING ROOM, BEDROOMS AND CORRIDORS.

NURSERY

LIBRARY

large-wattage indirect portable similar to the type recommended for bridge playing in the living room. General lighting can be secured from one or two luminous wall plates. Switch for general lighting should be near the door; switches for the book lighting units should be handy to each local area.

BATHROOMS

General illumination can be obtained from a dual-purpose lighting unit flushed into the ceiling. A luminous ceiling plate should be located over the tub and another over the shower (where separate), to avoid the semi-darkness that follows when the curtains are drawn. The mirror can be flanked with luminous wall plates, or set out from a shallow bowl-shaped depression in the wall extending above and to each side of the mirror about half the mirror width. The lights are placed behind the mirror in this depression which serves as a large indirect reflector. When the mirror is the door of a cabinet there should be sufficient projection on each side of and above the cabinet to conceal the lights, which should then be behind a second protecting louver so that they will not be exposed when the mirror is swung away. Switches should be placed at the door.

LAUNDRY

Flush, luminous ceiling plates should be located over tubs, ironer and sorting table. Three-way switches at entrance to, and exit from, laundry.

GAME ROOM

Luminous wall plates of the indirect type are desirable in this room because of the usual low ceilings and the need for high diffusion. This lighting can be supplemented with indirect portables for card games. Special lighting for billiards or similar indoor sports should be provided on the basis of the recommendations of the manufacturers of the sports equipment. The switch should be at the entrance.

GARAGE

Two lens units should be installed flush in the ceiling over the hood end of each car, and set to flood the motor with light when the hood is raised. Two flush floor lights of the grease-pit type should be located in each car space. Two additional lens units should be set flush in the ceiling alongside each side of the car body to facilitate washing. Where the garage will hold two cars the lights in the aisle between the cars can be arranged to direct light both ways. These lights can also be used for general illumination and should be on three-way switches at both entrance and exit (where both exist).

Flush lens units in the ceiling should be provided over the work bench. The garage lighting should be supplemented by provision for trouble lamps.

A double quadrant refractor panel can be installed over the garage doors to illuminate the driveway. When desired, it can be worked by a sonic switch operated by the sound of the horn, which can also be used to open motor-driven garage doors. Other methods of control, such as photo-electric apparatus and radio, are available for turning on the driveway light and opening the garage doors without leaving the car.

BOILER ROOM

The manual switch for the driveway light should be inside the garage doors. Flush, direct-lighting ceiling equipment is suggested, arranged to emphasize the front of the boiler or heating device, and the various controls. Provide three-way switches at the head of cellar stairs and the exit from the boiler room.

This may consist of a separate wire tie-in of one light in each of the principal rooms of the house (a continuous passage), joined to special lights built into the eaves of the house at front, sides and back (to floodlight the exterior), and also tied in with the outside front and rear entrance lights and the garage door light. The whole system may be controlled by a master switch in the master bedroom.

The night lights in the bedrooms and nursery can also be joined to this burglar light system.

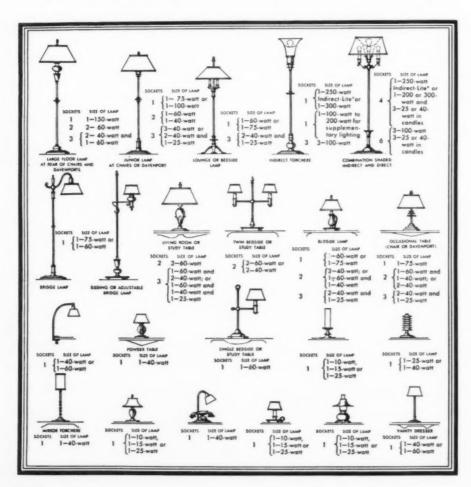
The toggle switch is now commonly used. It should always be placed on the lock side of a door, four feet from the floor. Where closet lights are not operated by door switches a luminous ball on the end of a pull chain will be a convenience. A switch that contains a pilot light used at the head of the basement stairs and at the foot of the attic stairs will tell when the light is left burning. A new 5-watt Mazda lamp is now available for this pilot light service. Mercury switches should be used in all locations requiring silent service. The convenience and practicality of the lighting equipment will be increased if as few different types and sizes of lamps as possible are required. Equipment requiring special lamps is unsatisfactory because of the difficulty of replacement. Many different sizes lead to confusion and incorrect relamping. Practical equipment is accessible, easy to clean and relamp, non-deteriorating in service, not subject to style obsolescence, and made of standard parts.

BURGLAR LIGHT SYSTEM

SWITCHES

LAMPS

MAINTENANCE



THIS CHART, PREPARED BY THE GENERAL ELECTRIC COM-PANY, IS A FAIRLY COMPRE-HENSIVE GUIDE TO THE TYPES, USE AND LAMPING OF PORT-ABLE LAMPS.

HOUSING OBSOLESCENCE

BY THOMAS S. HOLDEN,

VICE-PRESIDENT IN CHARGE OF STATISTICS AND RESEARCH, F. W. DODGE CORPORA-TION . . . CHAIRMAN OF MAYOR LAGUARDIA'S ADVISORY COMMITTEE ON REAL PROPERTY INVENTORY FOR NEW YORK CITY

SEE TABLE ON NEXT PAGE

Real property inventory reports for 25 small cities give important data on 230,091 residential structures containing 279,689 family units. These cities are well distributed geographically and the list includes slow-growing cities, rapidly-growing cities and cities with stationary population. Therefore the data appear to be adequate for drawing some general conclusions, particularly with respect to housing in American cities of less than 100,000 population.

Of these 230,091 residential buildings, 44.9 per cent were reported as needing minor repairs, 17.1 per cent as needing structural repairs, and 2.7 per cent as being unfit for use. The rather considerable need for minor repairs indicates a potential market for this kind of work; however, variations in the percentages of buildings so rated are not highly significant. The ratings of buildings needing structural repairs and of buildings unfit for use may be taken to include the structures in various stages of physical deterioration, and the combined percentages of buildings listed under these two ratings may be taken as indices of deterioration for the several cities.

In the accompanying Table the 25 cities are listed in the order of physical deterioration reported, and classified in six groups. The 4 cities of Group I have 25 to 40 per cent of their residential buildings either needing structural repairs or unfit for use; the 5 Group II cities, 20 to 25 per cent; the 6 Group III cities, 17 to 20 per cent; the 4 Group IV cities, 15 to 15½ per cent; the 3 Group V cities, 12 to 13½ per cent; the 3 Group VI cities, 10 per cent or less.

AGE AND OBSOLESCENCE

The buildings of the Group VI cities are, generally speaking, the oldest of all and are in the best physical condition. Next best in physical condition are the buildings of Group V, which contains Nashua with the highest median age of all, and Reno and Shreveport with unusually large proportions of relatively new buildings. In Group I, which has the worst physical condition, there are two cities, Paducah and Butte, with large numbers of old buildings; one, Asheville, with many relatively new ones; and one, Casper, with buildings of approximately average age. Butte is a city which has been losing population and now has an indicated housing surplus, which probably explains why many buildings there have been allowed to run down.

Comparison of structural repair needs with median ages of buildings seems to show that, in general, the ages of structures have little to do with their present physical condition.

STRUCTURAL MATERIALS AND OBSOLESCENCE

The Group I cities, whose buildings have deteriorated most, have a much larger percentage of masonry structures (brick, stone and concrete) than any other group, except Group VI. Omitting this last exceptional group, the proportion of masonry structures

decreases as we go down the scale of structural repair needs. This does not, of course, prove that masonry construction is less durable than wood construction; it simply shows that the original materials of construction do not necessarily give any indication of the physical soundness of the buildings.

HOME OWNERSHIP AND OBSOLESCENCE

The figures for percentages of owner-occupied homes indicate a tendency toward less need for structural repairs in such buildings as compared with rental units. This tendency is perhaps brought out somewhat more clearly by the following comparisons: In the 9 cities having more than 40 per cent of homes owner-occupied, 17.5 per cent of the buildings either need structural repairs or are rated as unfit for use; in the 11 cities in which owner-occupancy ranges between 30 and 40 per cent of the total units, 20.5 per cent of the buildings are rated low in physical condition; in the 5 cities with less than 30 per cent owner-occupancy, 22.2 per cent of the buildings have low physical-condition ratings. The disparity is not very great, but there is a definite indication that owner-occupied property is generally kept in somewhat better condition than rental property.

RENTAL-SCALES AND OBSOLESCENCE

The valuations of owner-occupied dwelling units and monthly rentals of rental units were reported for all the cities. For purposes of comparison, valuations have been turned into equivalent rentals and combined with the actual rental figures. The median figure used to designate the general rental index for each city is the half-way figure, so taken that exactly half the units rate higher and half rate lower than the index figure. Thus the median figure \$19.02 for all 25 cities indicates that a clear majority of the dwelling units would bring less than \$20 a month in the rental market.

In Groups I, II and III, which have large numbers of dwellings that are unfit or require structural repairs, only 5 cities out of 15 have median rentals above \$19.02. In Groups IV, V and VI, which have proportionately fewer buildings in poor physical condition, 9 out of the 10 cities have median rents above \$19.02. The exception is Shreveport, where the low proportion of poor buildings is probably accounted for by its having an unusually large proportion of comparatively new buildings.

The relationship of structural needs to rent-scales is even more strikingly brought out by the following comparison: In the 11 cities having median monthly rentals under \$19.02, 22.3 per cent of the buildings need structural repairs or are unfit for use; whereas the 14 cities with median rentals over \$19.02 show only 16.3 per cent of their buildings with low physical ratings. In short, the buildings showing greatest structural deterioration are, generally speaking, low-grade buildings.

HOUSING OBSOLESCENCE

(TEXT ON PREVIOUS PAGE)

GENERAL CONCLUSIONS

Physical obsolescence is much less a matter of age or type of structure than of the quality of construction. This should be a matter of common observation requiring no statistical proof, but the figures are interesting and impressive.

It is likely that large numbers of existing structures which have deteriorated physically are not worth the expenditure of very much money other than for minimum repairs.

A nation-wide campaign to stimulate repairs and modernization, aided by the favorable credit conditions created by the National Housing Act, will probably create an important volume of business within the upper and middle levels of owner-occupied homes, and this business is worth stimulating as an emergency measure. It is not, however, comparable with the volume of replacement work that is conceivable under a long-range plan for elevating housing standards generally.

PHYSICAL DETERIORATION OF HOUSING STRUCTURES

	CITY		NUMBER OF R	PER CENT NEE ING STRUCTUR EPAIRS OR UNI FOR USE	AL IT MEDIA	N AGE	PER CENT OF MASONRY CONSTRUCTION	NUMBER OF DWELLING UNITS	PER CENT OF UNITS OWNER- OCCUPIED	MEDIAN MONTHLY RENT OR RENTAL EQUIVALENT
I.	PADUCAH, KY BUTTE, MONT	:	7,765 7,358 10,833	39.6% 28.6 26.5	29 31 15	years	12.4% 32.2 12.2	9,029 10,727 12,584	33.6% 38.1 28.1	\$10.92 17.22 15.34
	CASPER, WYO		4,227	25.8	19	**	8.4	5,619	36.0	18.22
	GROUP I		30,183	30.3%	20.6	0	16.6%	37,959	33.4%	\$14.96
11.	LITTLE ROCK,* ARK		25,161	24.8%	18	years	12.1%	27,792	37.0%	\$15.40
	WICHITA FALLS, TEX	*	9,667	22.7	18	61	7.7	10,722	32.0	12.44
	PHOENIX, ARIZ		10,519	21.8	13	**	34.0	14,392	28.4	19.65
	COLUMBIA, S. C		10,009	20.8	23	**	14.9	12,198	29.3	14.44
	SPRINGFIELD, MO		14,801	20.5	22	**	7.8	16,200	45.8	16.07
	GROUP II		70,157	22.6%	17.0	**	14.3%	81,294	35.4%	\$15.72
11.	GREENSBORO, N. C		11,000	19.7%	18	years	9.8%	12,061	29.4%	\$17.25
	BATON ROUGE, LA		6,951	19.6	17	**	1.6	7,692	31.1	20.31
	DECATUR, ILL		14.662	19.1	21	**	9.6	16,407	43.9	20.82
	PUEBLO, COLO		10.882	18.8	28	**	28.6	12,723	46.4	14.32
	BOISE, IDAHO		5.167	18.2	25	**	8.7	6,477	44.9	23.74
	ALBUQUERQUE, N. M.		6,458	17.4	14	2.6	19.3	7,820	40.8	23.16
	GROUP III		55,120	19.0%	20.3	**	13.4%	63,180	39.8%	\$19.23
٧.	SANTA FE. N. M		2,145	15.4%	15	years	9.8%	2,720	45.0%	\$24.40
	SIOUX FALLS, S. D		7.555	15.3	18	**	4.0	9,240	43.4	26.86
	FARGO, N. D		5,209	15.3	20	**	3.7	7.467	36.6	33.20
	LINCOLN, NEB		18,780	15.2	22	**	8.5	23,242	45.9	25.92
	GROUP IV		33,689	15.3%	20.5	11	6.8%	42,669	43.7%	\$27.04
٧.	RENO, NEV		4,652	13.5%	16	years	23.5%	6,194	38.7%	\$28.91
	NASHUA, N. H		4,646	13.4	40	9.6	35.5	7,969	36.0	22.87
	SHREVEPORT, LA		19,722	12.2	14	**	3.4	21,872	32.1	15.46
	GROUP V		29,020	12.6%	15.6	**	6.6%	36,035	34.1%	\$19.74
/1.	HAGERSTOWN, MD		5,035	10.0%	28	years	53.5%	8,149	33.0%	\$20.13
	FREDERICK, MD		2,635	9.8	39	**	74.2	3,785	42.5	21.54
	BURLINGTON, VT		4,252	9.7	39	**	13.7	6.618	39.3	28.12
	GROUP VI		11.922	9.8%	33.0	11	43.9%	18.552	37.2%	\$23.34
	TOTAL, 25 CITIES		230.091	19.8%	19.5	11	13.4%	279,689	36.7%	\$19.02

^{*} Figures for metropolitan district.

THE CORRECT SOLUTION Made in 5 sizes. Maximum Capacity 3600 Gals. per Hour Retail Price (Size No. 1k) TO THE SEEPAGE WATER PROBLEM

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MODEL 33 Made in 1 size only Maximum Capacity 1400 Gals. per Hour Retail Price \$39.50 F.O.B. Detroit



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Copper and Bronze Throughout



The architect who is confronted with the problem of removing seepage water and keeping a basement dry, will find one of these Penberthy Pumps to be the logical solution. Ruggedly constructed of copper and bronze throughout, they are thoroughly dependable, compact and easy to install. They are carried in stock for immediate delivery by plumbing wholesalers everywhere.

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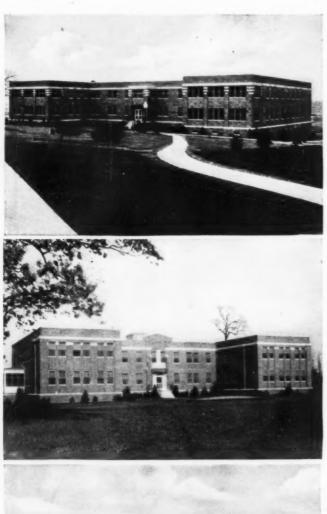
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Modern

Delaware State Hospital Buildings required 150,000 square feet of **Sealex**





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In specifying Sealex for this handsome group of hospital buildings, Architect G. Morris Whiteside made a clean sweep of Delaware State Hospital's flooring problems.

To begin with, there were hospital sanitary requirements. These were more than fulfilled by Sealex. Its smooth surface is free from cracks or joints—very easy to clean. Besides, the high linoxyn content in Sealex Linoleum has definite germicidal properties.

Economy of maintenance was, of course, considered. That was an easy one for Sealex. Its stain-proof, inlaid patterns are famous for retaining their good looks throughout the years of wear—without costing a cent for scraping, painting or varnishing.

And as for quiet and comfort underfoot—important points because they affect both patients and hospital staff—Sealex resiliency took care of them to everybody's satisfaction.

Sealex can be installed just as successfully in modernizing projects as in new construction. There is no costly preparatory work and little interruption of hospital routine.

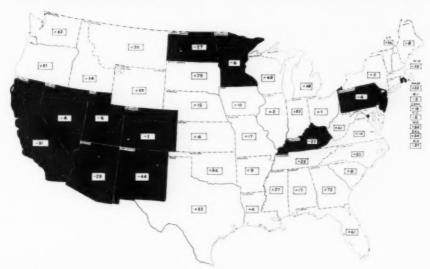
When Sealex materials are installed by authorized contractors of Bonded Floors or Bonded Walls, the full value of workmanship and materials is backed by a Guaranty Bond. Write us for information.

SEALEX WALL-COVERING In numerous installations this linoleum-type material has proved especially desirable for hospital walls. It is sanitary—washable—stain-proof—and makes a *permanent* wall treatment that never needs refinishing.

CONGOLEUM-NAIRN INC.... KEARNY, NEW JERSEY

SEALEX
floors and walls

BUILDING TRENDS AND OUTLOOK



BY L. SETH SCHNITMAN CHIEF STATISTICIAN F. W. DODGE CORPORATION

BUILDING DURING 12 MONTHS—JUNE, 1933-MAY, 1934, INCLUSIVE. Corresponding twelve months ended May. 1933, taken as base. SHADED AREA: BELOW BASE. UNSHADED AREA: ABDVE BASE. Figures denote percentage change from bate. Floor space for new building contracts, 37 states east of the Rocky Mountains. Permit valuations for Rocky Mountain and Pacific const states. Map. copyright American Map. Co., N. Y. Authorized reproduction No. 5025.

CONTRACTS SHOWED GAIN IN MAY

MATERIAL PRICE MEASURING ROD

F. W. DODGE CORPORATION COMPOSITE PRICES

This	Month	Year
Month	Ago	Ago
\$2.25	\$2.30	\$2.10
12.30	12.30	11.75
1.65	1.65	1.60
16.40	16.45	15.60
	Month .\$2.25	Month Ago .\$2.25 \$2.30 12.30 12.30 1.65 1.65

The prices in this tabulation enable one to visualize at a glance the main trend of the material market. Their significance does not extend beyond that point, and the explanation should be read carefully. Prices given in this comparison are composite and do not in all cases refer to one item. For instance, the price of structural steel is the composite of prices of shapes and plates f.o.b. Pittsburgh; the price of lumber is a composite of five items of Southern pine and five items of Douglas fir f.o.b. mill; the price of cement is a composite of prices in fourteen different cities per barrel, carload lots, to contractors; price of brick is composite in fourteen cities per M. delivered on the job.

ontracts awarded for construction during the first half of June exceeded \$62,000,000 for the 37 Eastern States. This was about at the rate established for the initial half of May and compares with \$60,000,000 for the corresponding half of June, 1933.

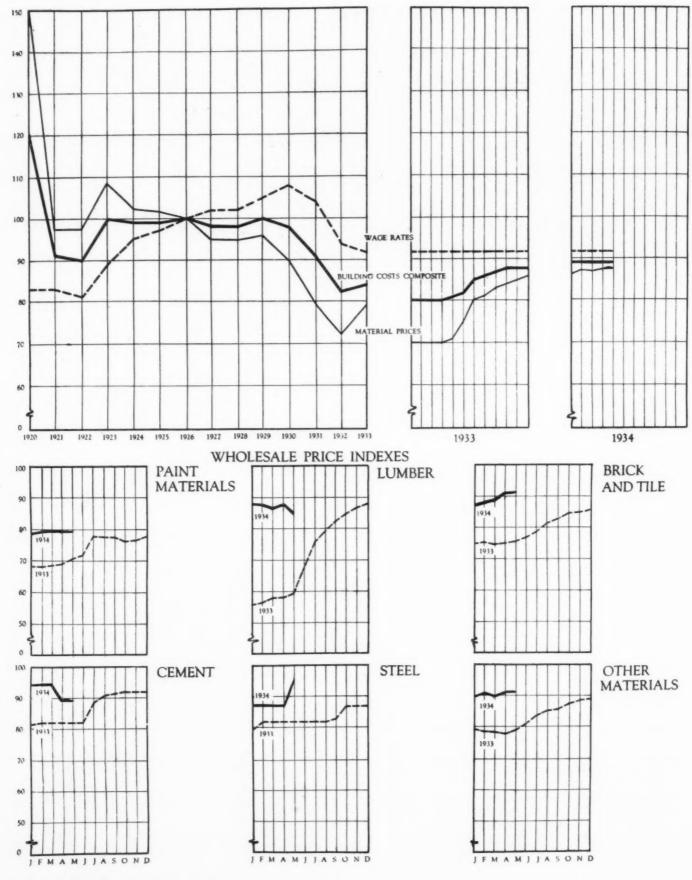
Contracts let for all classes of construction during May were 2 per cent larger in dollar volume than the April total. At the same time the May contract total of \$134,438,700 was substantially above the contract total of \$77,171,700 reported for May, 1933.

Privately-financed contracts amounted to \$62,641,300 in May. This was the largest private contract total since June of last year. It was 17 per cent over April and 17 per cent over May of last year. It should be noted that the May increase in privately-financed contracts was entirely due to the inclusion of one large new building project in connection with the development of Rockefeller Center, New York,

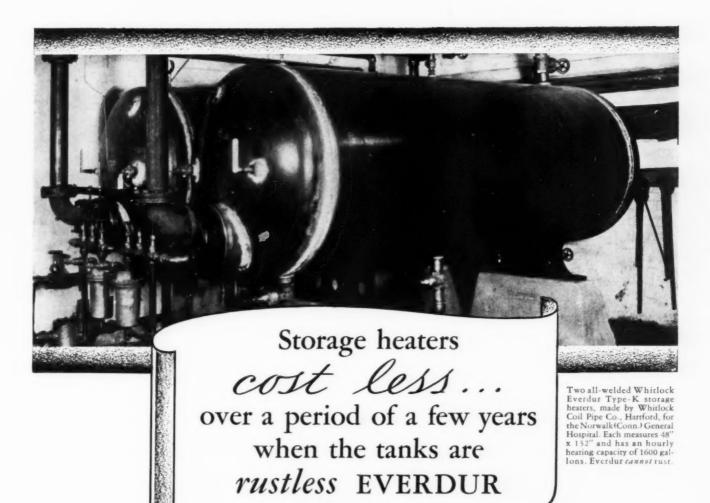
Publicly-financed contracts, i.e., construction jobs undertaken chiefly with PWA funds, totaled \$71,797,400 for May. This was smaller by 8 per cent than the total recorded for public contracts in April. With the exception of February of this year, the May total was the smallest monthly volume for this class of work reported since August, 1933. At the same time the total for publicly-financed contracts was three times as large as that shown for May, 1933.

For the elapsed months of 1934 construction awards of all descriptions in the 37 Eastern States totaled \$727,239,000 as contrasted with \$329,771,500 for the corresponding five months of 1933. Gains over 1933 for the current year were shown in each of the four major construction classifications: for residential building, about 20 million dollars; for nonresidential building, about 100 millions; for public works, almost 245 millions; and for public utilities more than 30 millions.

Contemplated construction reported during May for the 37 states east of the Rocky Mountains totaled \$241,271,200 as against \$319,721,600 for April and \$352,467,700 for May of last year.



1926 MONTHLY AVERAGE = 100



BRAND new in 1926. Rusted by 1932, so badly that periodic cleaning was necessary. Then the tank leaked and had to be replaced in 1933. That is the life story of a rustable heater in the Norwalk (Conn.) General Hospital.

And that experience is all too typical. When a heater is of rustable metal, it can serve satisfactorily only for a limited time. Then it is necessary to purchase a new heater and pay the cost of another installation...to say nothing of the expense and annoyance caused by rust before

the tank failed. Tanks of Everdur save money because they cannot rust.

Nearly all copper, Everdur is a special alloy which provides the

strength of medium carbon steel, and may be readily welded by all commonly used methods. Thus this Anaconda Metal possesses all the requirements for durable, rustless canks. And they are available from leading manufacturers who are prepared to quote on and furnish Everdur equipment for hotels, hospitals, apartments, office buildings, laundries, etc.

Equally logical and satisfactory is the use of Everdur for many other applications. Among them: air-conditioning equipment, masonry anchors, drains and ducts, electrical metallic

tubing, smoke washers and window cleaner bolts. For additional data, and names of fabricators, address our office nearest you.

EVERDUR METAL

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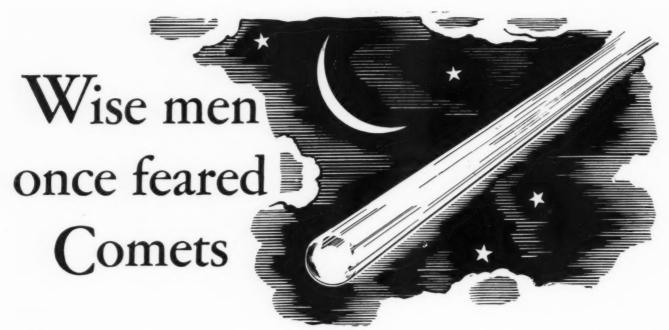


THE AMERICAN BRASS COMPANY

General Offices: Waterbury, Connecticut



EVERDUR METAL for TANKS



That a comet forecasts floods, wars, plagues and other disasters is a belief that old-time savants took seriously.

Another belief, much more recent and now swiftly passing, is that only by paying a high price can you get sheets of exceptional rust-resist-

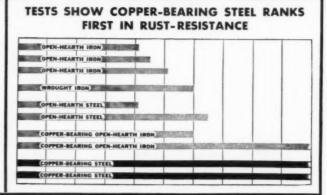
exceptional rust-resistance. The American Society for Testing Materials put iron and steel sheets of various compositions to the test of exposure to the atmosphere for a period of years. These tests, which give architects a sound, scientific basis on which to specify sheets for rust-resistance, revealed that an inexpensive material, copperbearing steel, is unsurpassed in the whole range of commercial steels and irons in its ability to withstand rust. It outlasts ordinary steel from two to two and one-half times.

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made of copper-bearing steel. They combine the durability of copper-bearing steel with Bethlehem quality. They are inexpensive. They are long-lasting. More and more, architects are letting the facts guide them, and specifying Beth-Cu-Loy Sheets for every application where moisture meets metal.

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This chart summarizes the results of the A. S. T. M. tests at Brunot Island, near Pittsburgh, Pa. These results, like those obtained at other locations, show that under exposure to atmospheric corrosion copperbearing steel is superior to other commercial grades of steel and iron.



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Architects are invited to use the coupon on this page as a convenient means of obtaining manufacturers' publications describing in detail the products and materials mentioned





GENERAL ELECTRIC ANNOUNCES REVOLUTIONARY REFRIGERATOR, LOW-PRICE ELECTRIC RANGE

A new type of electric refrigerator and electric range are announced by General Electric Company. The refrigerator is priced at \$74.50 and the range at \$72 at the factory. They may be purchased separately, or in combination. The combination price is \$139.50 at the factory.

The new refrigerator is of the "lift top" type, with all steel cabinet, hermetically sealed unit, carrying a 5-year service protection plan at an additional charge of \$5. It will hold enough food to supply a family of four for three days. The outer wall of the refrigerator cabinet forms a radiating surface for the condenser, which is said to be a new departure in domestic refrigeration. Two inches of insulation are used. Hermetically sealed mechanism, equipped with an overload protection device, is located at the bottom. To sell at such a low price, the refrigerator has been stripped of all non-essentials. Current consumption for the new model is low, the announcement says, the refrigerator using less than one kilowatt hour of electricity per day under normal operating conditions. The unit is mounted on legs and is portable, weighing approximately 150 pounds. Interior is of porcelain and exterior of baked Glyptal enamel, finished in white. Said to be extremely quiet and never needs oiling.

The new General Electric range is equipped with automatic precision temperature control, stainless porcelain enamel cooking surface and reversible double pole surface unit switches. Compact, it occupies little space. The unit equipment of the range consists of three surface units, two being 6½ inches in diameter and of 1,000 watts and one being 8½ inches in diameter and of 2,000 watts; one oven unit—3,000 watts for "Preheat," 1,000 watts for "Bake" and 2,000 watts for "Broil." Maximum connected load is 7.0 kws. Shipping weight is 150 pounds.

The Architectural Record, July, 1934

7B VITALARM SIGNAL

An electrically operated device that detects fire and sounds an alarm is manufactured by The Gamewell Company of Newton, Mass. This unit, 61/2 inches long and 3 inches in diameter at its widest point, is screwed into an ordinary light socket. It employs a "rate of rise" principle for speed in fire detection. A sustained rise of 15° to 20° per minute in room temperature for one or two minutes causes an electrical circuit in the Vitalarm to close. Automatically when this occurs an intermittent howler is put in action. As a supplementary and emergency provision the unit contains also a permanent or "fixed" bimetallic thermostat set at 150° F. which actuates the signal if by any chance the temperature should rise at a rate less than 15° to 20° per minute until it reaches 150° from a slow, smouldering fire of unusual nature. This feature, however, would seldom if ever be called upon, so certain is the "rate of rise" operation. A small neon type lamp, consuming less than 4/10 watt, glows constantly, marking the location of the unit and indicating its operating condition. The system is easily installed and applicable to practically every type of building. For remote rooms it is possible to connect an extension alarm system which sounds simultaneously as the fire detecting apparatus functions.

BAKELITE RESINS FOR PAINTS

Tests described and illustrated in a booklet released by Bakelite Corporation indicate that the use of Bakelite synthetic resins for paints and varnishes adds greatly to durability, resistance to wear, weather, water, acid, abrasion.

TO OBTAIN FURTHER INFORMATION

about any products mentioned, write the index numbers in space below. For literature about products advertised in this issue, give name of the product and manufacturer. Return coupon to The Architectural Record, 119 West 40th Street, New York, N. Y.

Name____

Position_____

Street_____



MODERN CATALOGING

Published Monthly by SWEET'S CATALOG SERVICE Division of F. W. Dodge Corporation



1934

Volume 1

JULY, 1934

Number 2



"All that is needed now is a Sweet's of ten volumes in place of four, so that it will embrace practically the entire building industry. This, I hope will come in due course."

> H. R. Dowswell Shreve, Lamb & Harmon New York, N. Y.

Another Consumers' Research

THE STORY recently reached us of a building hardware manufacturer's decision to take advantage of a favorable market and build for himself a long contemplated new home.

Plans progressed nicely until Mrs. and Mr. arrived at hardware, and lo! he couldn't make a sale. She thought the designs suitable to some types of homes, but too old-hat for hers. Contrary to the ten commandments of good salesmanship, he, in time, likewise lost faith in the product, especially for use in his own home and a competitor got the job!

His employees still gossip about the old man's face-lifting spree which resulted in new designs for nearly everything in the plant.

"We have come to depend upon Sweet's more and more as it improves with time. It is referred to:

By Designers for information regarding available materials and uses;

By Draftsmen for details; By Engineers for formulae; and By Specification Writers for descriptive matter."

E. L. KIRBY
Starrett and Van Vleck
New York, N. Y.

Save the Pieces

WHEN A MANUFACTURER sends you an individually-bound copy of his catalog, he says in effect:

"Here is a piece of your catalog file. Hundreds of other companies will send you more pieces. Save the pieces—and in time you will have the makings of a file. Of course, it's up to you to make the file and to keep it in working order. We know you'll lose a lot of catalogs, but we hope you won't lose ours."

Why does he continue this haphazard method which, even when it doesn't cut his line of communication, so often results in irritation and delay at both ends?

Has he ever told you? If so, we wish you would pass the word along to us.

Charter Members-'06

THE FLATIRON BUILDING was about the last word in breath-taking skyscrapers when the first Sweet's file was distributed in 1906. Since then many changes have taken place in the building industry.

Mergers and liquidations have removed the names of numerous firms from the active roster. Yet in a recent comparison of Sweet's 1934 with Sweet's 1906, we found a gratifying number of charter members still with us—wars, panics, depressions, and administration changes notwithstanding.

Here is the roll call of those pioneers who blazed the trail for modern catalog practice and who are still doing it:

American Enameled Brick Corp. American Mason Safety Tread Co.

American 3-Way Luxfer Prism Co. (formerly American Luxfer Prism Co. American 3-Way Prism Co.)

Anchor Post Fence Co.

Antihydrene Co.
Armstrong Cork Co.
Atlantic Terra Cotta Co.
Barber Asphalt Co.
Barrett Co.
Benjamin Electric Co.
Bird & Son, Inc.
Bommer Spring Hinge Co.
Burlington Venetian Blind Co.

Burnham Boiler Corp.
Burrowes Corp., The
(formerly The E. T.
Burrowes Co.)
Caldwell Mfg. Co.
Philip Carey Co.
Casement Hardware Co.
Cincinnati Mfg. Co.
Chamberlain Metal Weatherstrip Co., Inc.

MODERN CATALOGING, July 1934

Chicago Spring Hinge Co. Concrete Steel Co.

Concrete Steel Co.

Standard (formerly Standard Concrete Steel Co.) H. W. Covert Co. Dahlstrom Metallic Door Co. Deming Co. Detroit Show Case Co. Duplex Hanger Co. Elevator Supplies Co. Flintkote Corp.
(formerly J. A. & W. Bird Co.) Galloway Terra Cotta Co. Gilbert & Barker Mfg. Co. Goulds Pumps, Inc. R. Guastavino Co. Herring-Hall-Marvin Safe Higgin Mfg. Co. Hitchings & Co.

Gormerly Burnham-(formerly Burnham-Hitchings-Pierson Co.) Hydraulic Press Brick Co. Johns-Manville Johnson Service Co. (formerly Johnson Temperature Regulating Co.) O. W. Ketcham Kewanee Boiler Co.

Kinnear Mfg. Co. Logan Company (formerly Dow Wire & Iron Works) Lord & Burban Ludowici Celadon Co. (formerly Celadon Roofing Tile Co.) McCray Refrigerator Sales Meneely Bell Co. Mississippi Wire Glass Co. Muralo Co., Inc. Murphy Varnish Co. National Fireproofing Co. National Lead Co. National Ventilating Co. Otis Elevator Co. Pantasote Co., Inc. Pittsburgh Plate Glass Powers Regulator Co. Pullman Mfg. Co. Raymond Concrete Pile Co. Richards-Wilcox Co. Roberts Filter Mfg. Co. Robertson Art Tile Co. Samson Cordage Works Sayre & Fisher Brick Co. Silver Lake Co. Sedgwick Machine Works

W. & J. Sloane A. J. Snyder Lime Company (formerly Consolidated Rosendale Cement Co.) Richard N. Spiers & Son Standard Textile Products Stanley Works Stewart Iron Works Co., Inc. Tirrill Gas Machine Co. Toch Bros., Inc. Truscon Steel Co.
(formerly Truss Metal
Lath Co., General
Fireproofing Co.) Tuttle & Bailey W. S. Tyler Co. Universal Atlas Cement Co. (formerly Atlas Port-land Cement Co.) Universal Safety Tread Co. U. S. Mineral Wool Co. Van Kannel Revolving Door Watson Mfg. Co., Inc. Wickwire-Spencer (formerly Clinton Wire Cloth Co.) J. G. Wilson Corp. Wood Mosaic Co. Wheeling Corrugated Co.

Sweets Consulting Staff

THE members of Sweet's Consulting Staff personally prepared or directed the preparation of many of the most complete and informative catalogs filed in Sweet's.



A. LYNWOOD FERGUSON: educated University of Pennsylvania, B.S. in Architecture 1920; associated at various times with the architectural offices of George Griswold, D. Knickerbacker Boyd and others; Technical Secretary, 1920-26 and Managing Director 1926-28, Structural Service Bureau, an organization acting as architectural advisor and consultant to associations and companies producing building materials and equipment, and also in preparing catalogs, handbooks and advertising for architects; consulting architect for Sweet's Catalog Service since 1928.

Catalog Economics

THE splendid support of the profession has been one of the important contributing factors in the successful development of Sweet's. Many architects take every opportunity to recommend to manufacturers that they file their catalogs in Sweet's. Some, with commendable conscientiousness, add the qualification, "provided the cost is not prohibitive," their impression being that the Sweet's plan involves great added expense to those on the selling end. This is far from the fact.

Sweet's clients pay on the average only one cent per page per year to send you their catalogs in the Sweet's file. This charge includes printing, filing and delivery to your office and in many cases, preparation of the catalog by Sweet's staff of consulting architects. It is the cost of *individual* catalog distribution which is prohibitive. Only a pitifully small percentage of separate catalogs find their way into a file—so few that a catalog costing 25 cents to print and deliver, on the average, actually costs \$1.25 per copy filed.

A manufacturer can place a 24-page catalog in 13,000 offices of architects, engineers and general contractors, via the Sweet's file, at less than 24 cents apiece. Even if he were able to prepare, print and distribute individual copies of the same catalog to the same offices for 20 cents apiece, the net result would be a "saving" of \$500. And for this "economy," he would consign 80 per cent of his catalogs to the scrap heap.

Even in the case of the manufacturer who distributes only a single page bulletin, Sweet's can handle the job at less than the cost of mailing alone!

Note: This and the other related subjects are discussed more fully in Sweet's Catalog File, 1934, Section A, page 104.

As We Were



"ROYAL FLUSH"
SANITARY PLUMBING-1906.

Nothing less than genius was responsible for the naming of this fixture which was the dernier cri in its day. Certainly, no ordinary numerical designation could have carried the subtle suggestion to the architect to stand pat on his specification. Our illustration is reproduced from the manufacturer's catalog in Sweet's for 1906.

COLOR-SEAL ELIMINATES DISCOLORATION

It is difficult to use a light-colored paint or enamel on a surface already coated with asphalts or with certain dyes and stains. The original, dark color shows through. This "bleeding," as it is called, is said to be overcome by a new sealer offered by The Glidden Company of Cleveland, Ohio. One coat of Color-Seal is claimed to be sufficient in most cases for absolute assurance against "bleeding" discoloration. Never are more than two applications required.

7F

AIR CIRCULATOR FOR PROMOTION OF SUMMER COMFORT ANNOUNCED BY GENERAL ELECTRIC

An air circulator, for use in inducing comfortable conditions in the home during hot summer weather, has just been announced by the Air Conditioning Department of the General Electric Company, New York. The air circulator is designed primarily for installation in the attics of homes where it accomplishes its purpose in two ways: (1) by circulating air through the attic during the daytime, it practically eliminates heat leakage into the living quarters from hot sun effect on the roof; (2) by drawing the relatively cool outside air through the living quarters toward the end of the day and during the evening it quickly gives the home the benefit of the cooler outside temperature.

The G-E Type HV-1 air circulator consists of a rubber-cushion mounted motor directly driving an 18-inch, three-blade, aphonic-pressure-type propeller fan, quiet in operation and assembled in a sturdy metal cabinet attractively finished in gray and nickel. The fan operates at 860 r.p.m. and delivers 2,050 to 2,600 cu. ft. of air per minute, depending upon the amount of back pressure. The device may be set in front of an attic window and connected to the nearest electric outlet, or it may be permanently installed with a duct connection to

the outside and with permanent electric wiring, a time switch, and other accessories. It is available with either an a.-c. or d.-c. motor, as required. The automatic time switch, offered as an accessory, is of the mechanical type and can be set for any period up to ten hours.

7F

NEW FREON BALANSEAL CONDENSING UNITS



The completion of two new Freon condensing units, consisting of 3-H.P. triple-cylinder and 7½-H.P. double cylinder Balanseal Compressors, the latter of which is illustrated, is announced by York Ice Machinery Corporation. The new units are said to achieve smaller over-

all dimensions and substantial reduction in weight, with no sacrifice of capacity.

The triple-cylinder unit is a 25/8", 3-H.P. compressor, with water-cooled condenser. The space required for this compressor unit is 31/4" narrower than the York Model 442-FW of the same capacity with a 10" reduction in height. This reduction in head room permits installation within smaller areas.

The new York Balanseal double cylinder unit, of 7½-H.P. capacity, operating at slow speed in comparison with other units of its size and capacity (440 r.p.m.), develops 82% of the capacity of preceding York models yet requires only 75% of the horsepower. The weight of the new two-cylinder unit is only 37% of its predecessor—a decided advantage when installing the machine in buildings where floor loads must be considered. The maximum length of the two-cylinder unit is only 45", as compared with eight feet in length for the older type, and it occupies only 27% of the floor space. These reduced dimensions obviously facilitate installation.

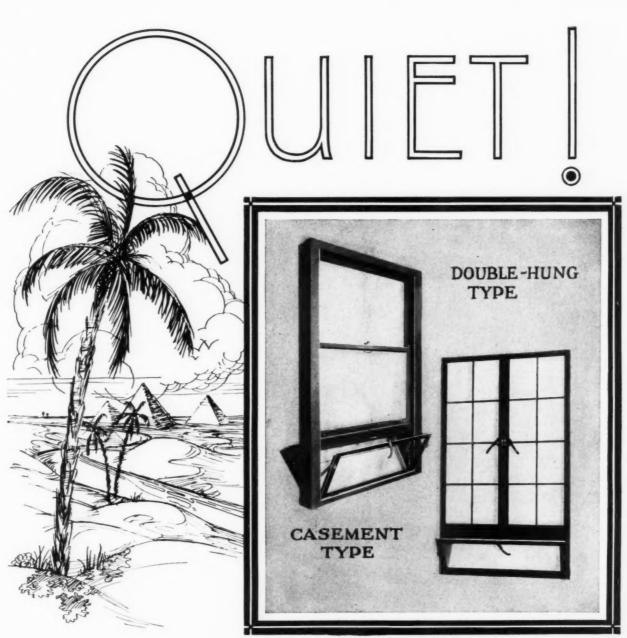
Under the Floor

Duriron claims to be acid proof and it is . . . an absolute safeguard against corrosion and rust.

THE DURIRON COMPANY, Inc. 404 N. Findlay Street DAYTON, OHIO

See Our Catalog in Sweet's

DURIRON ACID PROOF DRAIN PIPE



(PATENT APPLIED FOR)

SILENTAIRE

Entirely modern, appealing to quiet and comfort, the Truscon SILENTAIRE Window represents a decided advantage over the ordinary type of window. Available in Double-Hung or Casement type, this outstanding new Truscon development provides ample natural ventilation and closed

window quietness. A complete shop-fabricated unit, the original cost of Truscon SILENTAIRE Windows is but little more than that for a standard window. Erection is simple. There are no maintenance or operation costs.

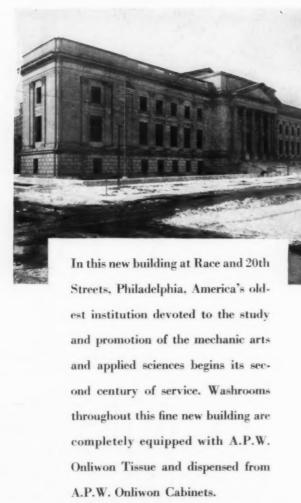
Interesting booklet will be sent upon request.



TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

SALES OFFICES IN ALL PRINCIPAL CITIES

NEW FRANKLIN INSTITUTE PICKS ONLIWON



	AR 7-34
	A.P.W. PAPER Co., Albany, N. Y. Please send me, free, the latest and complete catalogue of A.P.W. Cabinets and Fixtures.
1	Name
100	Address

7G ISTEG REINFORCING STEEL

A new type of high-strength reinforcing steel, called Isteg steel, is finding general favor in central Europe due to its inherent economies. In Germany, Austria and Czechoslovakia, as a result of government tests, a unit stress of 25,500 lbs. per sq. in. is permitted for Isteg steel as against 17,000 lbs. per sq. in. for mild steel. In addition, when Isteg steel is used, the government specifications permit the concrete stresses to be increased by 15 percent. An Isteg steel reinforcing bar consists of two ordinary mild steel bars which have been twisted together cold. This cold-working process raises the yield point of the steel considerably so that higher unit stress may be permitted before cracking of the concrete takes place. Moreover, the abrupt increase in unit elongation at the yield point, characteristic of ordinary reinforcing steel, is eliminated in the Isteg bars. Cracking in the tension side of a reinforced concrete beam commences when the unit elongation of the steel exceeds 0.2 percent. Under this condition, the unit stress in Isteg steel is claimed to be about 50 percent higher than the unit stress in mild steel.

The increase in working stress for Isteg steel is further justified by the fact that the cold-twisting operation constitutes an automatic test to reveal any defects which may exist in the original mild steel bars. Thus each Isteg bar may be said to have been thoroughly inspected along its entire length. Isteg bars bond perfectly to concrete as the twisting operation automatically removes all scale and the twist increases bonding efficiency. The economical efficiency of this steel has been demonstrated by comparative concrete beam tests. One series of tests, according to the manufacturers, showed that for beams of the same concrete section, the weight of round bars was 53 percent greater than the weight of Isteg steel to develop equal strengths. In another series of beam tests in which equal weights of round bars and Isteg steel were used, 24 percent more concrete was used with the round bars without developing the strength of the beams reinforced with Isteg steel. In all cases, the beams reinforced with Isteg steel reached higher loads before the initial cracking of the concrete.

7H SPECIFICATIONS FOR USE OF WHITE-LEAD PAINT; ADDITIONAL RELEASES BY NATIONAL LEAD CO.

As a convenience in designating exact specifications applying to particular projects, letters and numerals are employed to mark the sections and paragraphs of the specifications booklet prepared by National Lead Company. The publishers have made every effort to insure completeness and reliability of the data. National Lead Company also announces release of several booklets and folders discussing the subject of paints and painting as preservative and beautifier.

Now a Scientifically Designed

VENTILATING FAN THAT MEETS EVERY TEST

Before you specify a new Ventilating Fan for any store, office, factory, shop, garage, theatre or restaurant, be sure that you investigate this new Ventura Ventilator.

Inspect its streamline ring (Fig. 1). It serves as both fan inlet and discharge outlet. It is the result of years of practical experience and research by American Blower

tests prove it!

Engineers. You can literally see how air, in great quantities, passes through this fan in an unbroken column with the minimum power.

Then look at the fan blades (Fig. 2). Why, they're different! But they give an immediate impression of handling a lot of air - and



Measure it against fans of many more blades (Fig.3), and you'll find the same resultsgreater capacity, lower power consumption and quieter operation.

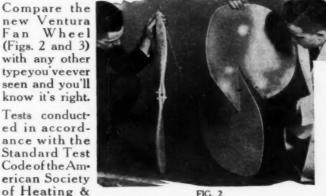
Look at it from the standpointofvibration (Fig. 1). The motor is quiet operating, spring suspension mounted (patented feature), the conduit is flexible, to preserve the resilient

motor mounting, and the motor supports are of

sturdy round seamless-steel tubing—all combining to prevent any drumming effect.

What a difference it will make in all places of business by removing bad air, greasy smoke excessive heat and bringing in fresh, healthful air.

AMERICAN BLOWER CORPORATION, DETROIT, MICHIGAN CANADIAN SIROCCO CO., LIMITED, WINDSOR, ONTARIO BRANCH OFFICES IN ALL PRINCIPAL CITIES Division of American Radiator and Standard Sanitary Corporation



of Heating & Ventilating Engineers demonstrate that the new Ventura Fan is so superior there just isn't any question. Compare your total installed cost for these new square plate fans with circular frame fans. From the cost standpoint alone you will find you are dollars and cents ahead, to say nothing of the extra air handled. Glance over the power consumption figures on tests run according to the standard practice of the American Society of Heating & Ventilating Engineers and you'll immediately see that, for the amount of air handled, comparisons do not exist for this fan.

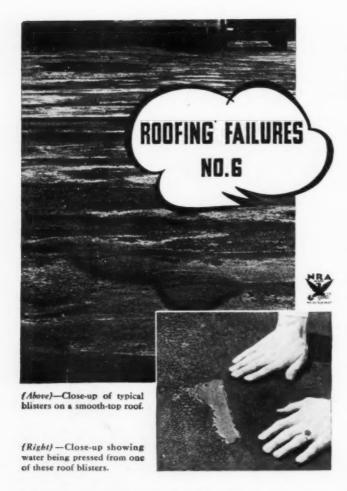
Quietness in operation, too, is a factor. You've heard ordinary fans and that's "enough said," but wait till you hear this one run (Figs. 4 and 5). Operating at top speed it is actually as quiet as a small sailboat slipping through the evening breeze.



FIG. 5

merican Rlowei

AMERICAN BLOWER CORPORATION, 6000 Russell Street, Detroit, Mich. BRANCH OFFICES IN ALL PRINCIPAL CITIES



In previous advertisements in this series we showed the permanent cracks and cheesy spots which often develop in smooth-top roofs.

Water from rain or snow get through these cracks and cheesy spots. It spreads between the plies of roofing. Sun heat turns it into expanding vapor which rips up large areas of roofing, as shown in the photograph.

You can avoid this and other types of roof failures by using coal tar pitch in your roofs.



OTHER KOPPERS PRODUCTS: Membrane Waterproofing; Dampproofing; Tar Aluminum Paints; Plaster Bond Paints; Tarmac Road Tar for Streets, Pavements, Drives, Highways.

7J DAYLIGHT LIGHTING

The scientific search for artificial illumination equal in quality to natural daylight, has resulted in a new light source, the high-pressure mercury vapor lamp, which will in combination with incandescent electric lamps provide illumination with all the elements of normal daylight. Westinghouse engineers will use this new development for the first time for the lighting of the Ford Motor Company's Exposition Building at a Century of Progress in Chicago. More than 500 of these new lamps will be used in the Ford Building. Each lamp consists of a long tubular bulb from which the light is intensely brilliant and greenish bluish in color. In characteristics it is different from the lamps that have used mercury vapor heretofore, as, due to the high temperature and pressure, the color is said to be much closer to that of the blue sky. These lamps produce more than twice as much light for the same power consumption as previous similar types, each providing 50 lumens of light per watt, whereas the ordinary incandescent lamp produces not more than 20 lumens per watt. The new lamps are used in combination with modern Mazda lamps in order to obtain the color elements found in natural daylight. For that reason, combination reflectors have been developed. Combining the two types of lamps in one reflector provides a more nearly perfect unit as their light can be blended in the proper proportion to approach true white light which contains equal proportions of all colors.

7K NEW INDIRECT-THREE-LITE LAMP

The development of a new lamp designed primarily for portable indirect units, and providing three different levels of illumination from a single bulb, has been announced by the Incandescent Lamp Department of General Electric Company at Nela Park, Cleveland, Ohio. As in the case of the Three-Light Lamp recently made available for commercial lighting applications, the new Indirect Three-Lite lamp contains two filaments, a 100-watt and a 200-watt, each of which may be burned individually or in combination with the other. Unlike its cousin, however, the new lamp is designed for burning in a base-down position. Because of its shape and construction, it is not adapted to present types of fixtures, and requires newly-designed equipment.

The Indirect-Three-Lite lamp has been developed to fill the need for greater flexibility in indirect lighting from portable units. It makes possible two approximately equal step-ups in illumination intensity. The 100-watt filament may be used alone when a low intensity of illumination for decorative rather than utilitarian purposes is desired. The 200-watt filament may be used individually when the lighting requirements are greater. Both filaments, totaling 300 watts, may be burned together when the maximum amount of light from the unit is desired.

The Architectural Record, July, 1934